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General Paper on Teaching & Research Aptitude (Paper -I)

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Syllabus

The main objective is to assess the teaching and research capabilities of the candidates. Therefore, the test is aimed at assessing the teaching and general/research aptitude as well as their awareness. They are expected to possess and exhibit cognitive abilities. Cognitive abilities include comprehension, analysis, evaluation, understanding the structure of arguments and deductive and inductive reasoning. The candidates are also expected to have a general awareness and knowledge of sources of information. They should be aware of interaction between people, environment and natural resources and their impact on quality of life. The details are given in the following sections—

Note— (i) Each section gets equal weightage : five questions and 10 marks from each section.

(ii) Whenever pictorial questions are set for the sighted candidates a passage followed by equal number of questions should be set for the visually handicapped candidates.

I. Teaching Aptitude—

- * Teaching : Nature, objectives, characteristics and basic requirements.
- * Learner's characteristics.
- * Factors affecting teaching.
- * Methods of teaching.
- * Teaching aids.
- * Evaluation systems.

II. Research Aptitude—

- * Research : Meaning, characteristics and types.
- * Steps of research.
- * Methods of research.
- * Research Ethics.
- * Paper, article, workshop, seminar, conference and symposium.
- * Thesis writing : its characteristics and format.

III. Reading Comprehension—

- * A passage to be set with questions to be answered.

IV. Communication—

- * Communication : Nature, characteristics, types, barriers and effective classroom communication.

V. Reasoning (Including Mathematical)—

- * Number series, letter series, codes.
- * Relationships, classification.

VI. Logical Reasoning—

- * Understanding the structure of arguments.
- * Evaluating and distinguishing deductive and inductive reasoning.

- * Verbal analogies : Word analogy—
Applied analogy.
- * Verbal Classification.
- * Reasoning Logical Diagrams : Simple diagrammatic relationship, multidigrammatic relationship.
- * Venn diagram, Analytical Reasoning.

VII. Data Interpretation—

- * Sources, acquisition and interpretation of data.
- * Quantitative and qualitative data.
- * Graphical representation and mapping of data.

VIII. Information and Communication Technology (ICT)—

- * ICT : meaning, advantages, disadvantages and uses.
- * General abbreviations and terminology.
- * Basics of internet and e-mailing.

IX. People and Environment—

- * People and environment interaction.
- * Sources of pollution.
- * Pollutants and their impact on human life, exploitation of natural and energy resources.
- * Natural hazards and mitigation.

X. Higher Education System : Governance, Polity and Administration—

- * Structure of the institutions for higher learning and research in India, formal and distance education, professional/technical and general education, value education, governance, polity and administration, concept, institutions and their interactions.

SAMPLE QUESTIONS

I. Teaching Aptitude—

1. Which one of the following is the main objective of teaching ?
 (A) To give information related to the syllabus
 (B) To develop thinking power of students
 (C) To dictate notes to students
 (D) To prepare students to pass the examination
Key : (B)
2. Which one of the following is a good method of teaching ?
 (A) Lecture and Dictation
 (B) Seminar and Project
 (C) Seminar and Dictation
 (D) Dictation and Assignment
Key : (B)
3. Teacher uses teaching aids for—
 (A) Making teaching interesting
 (B) Making teaching within understanding level of students
 (C) Making students attentive
 (D) The sake of its use
Key : (B)
4. Effectiveness of teaching depends on—
 (A) Qualification of teacher
 (B) Personality of teacher
 (C) Handwriting of teacher
 (D) Subject understanding of teacher
Key : (D)
5. Which of the following is not characteristic of a good question paper ?
 (A) Objectivity
 (B) Subjectivity
 (C) No use of vague words
 (D) Reliable
Key : (B)

II. Research Aptitude—

1. A researcher is generally expected to—
 (A) Study the existing literature in a field
 (B) Generate new principles and theories
 (C) Synthesize the ideas given by others
 (D) Evaluate the findings of a study
Key : (B)

2. One of the essential characteristics of research is—
 (A) Replicability (B) Generalizability
 (C) Usability (D) Objectivity
Key : (D)
3. The Government of India conducts Census after every 10 years. The method of research used in this process is—
 (A) Case study (B) Developmental
 (C) Survey (D) Experimental
Key : (C)
4. An academic association assembled at one place to discuss the progress of its work and future plans. Such an assembly is known as a—
 (A) Conference (B) Seminar
 (C) Workshop (D) Symposium
Key : (A)
5. An investigator studied the census data for a given area and prepared a write-up based on them. Such a write-up is called—
 (A) Research paper (B) Article
 (C) Thesis (D) Research report
Key : (B)

III. Reading Comprehension—

Read the following passage and answer the question Nos. 1 to 5.

The Constitution guarantees every citizen the fundamental right to equality. Yet after 50 years of independence, just one perusal of the female infant mortality figures, the literacy rates and the employment opportunities for women is sufficient evidence that discrimination exists. Almost predictably, this gender bias is evident in our political system as well. In the 13th Lok Sabha, there were only 43 women MPs out of a total of 543, it is not a surprising figure, for never has women's representation in Parliament been more than 10 per cent.

Historically, the manifestos of major political parties have always encouraged women's participation. It has been merely a charade. So, women's organizations, denied a place on merit, opted for the last resort, a reservation of seats for women in parliament and State Assemblies.

Parties, which look at everything with a vote bank in mind, seemed to endorse this. Alas, this too was a mirage.

But there is another aspect also. At a time when caste is the trump card, some politicians want the bill to include further quotas for women from among minorities and backward castes. There is more to it. A survey shows that there is a general antipathy towards the bill. It is actually a classic case of doublespeak : in public, politicians were endorsing women's reservation but in the backrooms of Parliament, they were busy sabotaging it. The reasons are clear : Men just don't want to vacate their seats of power.

- The problem raised in the passage reflects badly on our—
(A) Political system
(B) Social behaviour
(C) Individual behaviour
(D) Behaviour of a group of people
Key : (B)
- According to the passage, political parties have mostly in mind—
(A) Economic prosperity
(B) Vote bank
(C) People's welfare
(D) Patriotism
Key : (B)
- "Trump Card" means—
(A) Trying to move a dead horse
(B) Playing the card cautiously
(C) Sabotaging all the moves by others
(D) Making the final jolt for success
Key : (D)
- The sentence "Men just don't want to vacate their seats of power" implies—
(A) Lust for power
(B) Desire to serve the nation
(C) Conviction in one's own political abilities
(D) Political corruption
Key : (A)
- What is the percentage of women in the Lok Sabha—
(A) 10 (B) 7.91
(C) 43 (D) 9.1
Key : (B)

IV. Communication—

- Informal communication network within the organization is known as—

- Interpersonal Communication
- Intrapersonal Communication
- Mass Communication
- Grapevine Communication
Key : (D)

- TV Channel launched for covering only Engineering and Technology subjects is known as—
(A) Gyan Darshan (B) Vyas
(C) Eklavya (D) Kisan
Key : (C)
- In which state the maximum number of periodicals are brought out for public information—
(A) Uttar Pradesh (B) Tamil Nadu
(C) Kerala (D) Punjab
Key : (C)
- The main objective of public broadcasting system *i.e.* Prasar Bharti is—
(A) Inform, Entertainment & Education
(B) Entertain, Information & Interaction
(C) Educate, Interact & Entertain
(D) Entertainment only
Key : (A)
- The competency of an effective communicator can be judged on the basis of—
(A) Personality of communicator
(B) Experience in the field
(C) Interactivity with target audience
(D) Meeting the needs of target audience
Key : (D)

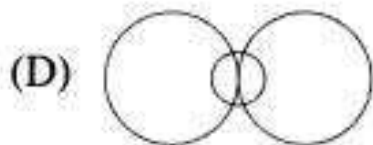
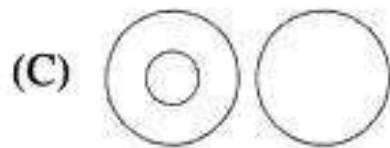
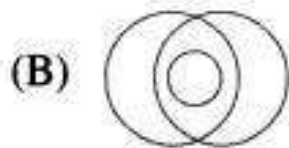
V. Reasoning (Including Mathematical)—

- Which one of the following belongs to the category of homogeneous data—
(A) Multi-storeyed houses in a colony
(B) Trees in a garden
(C) Vehicular traffic on a highway
(D) Student population in a class
Key : (A)
- In which of the following ways a theory is not different from a belief ?
(A) Antecedent—consequent
(B) Acceptability
(C) Verifiability
(D) Demonstratability
Key : (B)
- The statement—"Honesty is the best policy" is—
(A) A fact (B) A value
(C) An opinion (D) A value judgement
Key : (D)

4. Which one is like pillar, pole and standard ?
 (A) Beam (B) Plank
 (C) Shaft (D) Timber Key : (A)
5. Following incomplete series is presented. Find out the number which should come at the place of question mark which will complete the series—
 4, 16, 36, 64 ?
 (A) 300 (B) 200
 (C) 100 (D) 150 Key : (A)

VI. Logical Reasoning—

1. The following question is based on the diagram given below. If the two big circles represent animals living on soil and those living in water and the small circle stands for the animals who both live on soil and in water, which figure represents the relationships among them.



Key : (D)

2. Of the following statements, there are two statements both of which cannot be true but both can be false. Which are these two statements ?
 (i) All machines make noise
 (ii) Some machines are noisy
 (iii) No machine makes noise
 (iv) Some machines are not noisy
 (A) (i) and (ii) (B) (iii) and (iv)
 (C) (i) and (iii) (D) (ii) and (iv)

Key : (C)

3. In the following question a statement is followed by two assumptions (i) and (ii). An

assumption is something supposed or taken for granted. Consider the statement and the following assumptions and decide which of the following assumptions is implicit in the statement.

Statement : We need not worry about errors but must try to learn from our errors.

Assumptions : (i) Errors may take place when we are carrying out certain work.

(ii) We are capable of benefiting from the past and improve our chances of error-free work.

- (A) Only assumption (i) is implicit
 (B) Only assumption (ii) is implicit
 (C) Either assumption (i) or (ii) is implicit
 (D) Both the assumptions are implicit

Key : (D)

4. The question below is followed by two arguments numbered (i) and (ii). Decide which of the arguments is 'strong' and which is 'weak'. Choose the correct answer from the given below—

(A) (B) (C) (D)

Should the press exercise some self-restraint ?

(i) Yes, they should not publish news items which may incite the readers to indulge in wrong practices.

(ii) No, it is the responsibility of the press to present the truth irrespective of the consequences.

- (A) Only the argument (i) is strong
 (B) Only the argument (ii) is strong
 (C) Neither argument (i) nor argument (ii) is strong
 (D) Both the arguments (i) and (ii) are strong

Key : (A)

5. Study the argument and the inference drawn from that argument, given below carefully.

Argument : Anything that goes up definitely falls down. Helicopter goes up.

Inference : So the helicopter will definitely fall down.

What in your opinion is the inference drawn from the argument ?

- (A) Valid (B) Invalid
 (C) Doubtful (D) Long drawn one

Key : (D)

VII. Data Interpretation—

Four students W, X, Y, Z appeared in four papers, I, II, III and IV in a test. Their scores out of 100 are given below—

| Students | Papers | | | |
|----------|--------|----|-----|----|
| | I | II | III | IV |
| W | 60 | 81 | 45 | 55 |
| X | 59 | 43 | 51 | A |
| Y | 74 | A | 71 | 65 |
| Z | 72 | 76 | A | 68 |

where 'A' stands for absent.

Read the above table and answer below mentioned questions 1–5.

- Which candidate has secured between 60–65% marks in aggregate—
(A) W (B) X
(C) Y (D) Z Key : (A)
- Who has obtained the lowest average in aggregate—
(A) W (B) X
(C) Y (D) Z Key : (B)
- Who has obtained the highest average—
(A) W (B) X
(C) Y (D) Z Key : (A)
- In which paper the lowest marks were obtained by the candidates—
(A) I (B) II
(C) III (D) IV Key : (B)
- Which candidate has secured the highest percentage in the papers appeared—
(A) W (B) X
(C) Y (D) Z Key : (D)

VIII. Information and Communication Technology (ICT)—

- ICT stands for—
(A) Information common technology
(B) Information and communication technology
(C) Information and computer technology
(D) Inter connected technology Key : (B)
- Computer can—
(A) Process both quantitative and qualitative information

- (B) Store huge information
(C) Process information and fast accurately
(D) All the above Key : (D)

- Satellite Communication works through—
(A) Radar (B) Transponder
(C) Receptor (D) Transmitter
Key : (B)
- A computer is that machine which works more like a human brain. This definition of computer is—
(A) Correct
(B) Incorrect
(C) Partially correct
(D) None of the above Key : (A)
- Information and communication technology includes—
(A) E-mail
(B) Internet
(C) Educational television
(D) All the above Key : (D)

IX. People and Environment—

- It is believed that our globe is warming progressively. This global warming will eventually result in—
(A) increase in availability of usable land
(B) uniformity of climate at equator and poles
(C) Fall in the sea level
(D) melting of polar ice Key : (D)
- In which parts of India ground water is affected with arsenic contamination ?
(A) Haryana (B) Andhra Pradesh
(C) Sikkim (D) West Bengal
Key : (D)
- Sunderban in Hooghly delta is known for—
(A) Grasslands (B) Conifers
(C) Mangroves (D) Arid forests
Key : (C)
- Sardar Sarovar dam is located on the river—
(A) Ganga (B) Godavari
(C) Mahanadi (D) Narmada Key : (D)

5. Which one of the following trees has medicinal value ?
(A) Pine (B) Teak
(C) Neem (D) Oak Key : (C)
4. The reservation of seats for women in the Panchayat Raj Institutions is—
(A) 30% of the total seats
(B) 33% of the total seats
(C) 33% of the total population
(D) In proportion to their population

X. Higher Education System : Governance, Polity and Administration—

1. Which one of the following is not considered a part of technical education in India ?
(A) Medical (B) Management
(C) Pharmaceutical (D) Aeronautical

Key : (A)

2. Which of the following is a Central University ?
(A) Mumbai University
(B) Calcutta University
(C) Delhi University
(D) Madras University

Key : (C)

3. Identify the main Principle on which the Parliamentary System operates—
(A) Responsibility of Executive to Legislature
(B) Supremacy of Parliament
(C) Supremacy of Judiciary
(D) Theory of Separation of Power

Key : (A)

5. Match List I with List II and select the correct answer from the code given below—

List I (Institutions)

- (a) Indian Veterinary Research Institute
(b) Institute of Armament Technology
(c) Indian Institute of Science
(d) National Institute for Educational Pannesi and Administrators

List II (Locations)

1. Pune 2. Izat Nagar
3. Delhi 4. Bangalore

- | | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 2 | 1 | 4 | 3 |
| (B) | 1 | 4 | 2 | 3 |
| (C) | 2 | 3 | 1 | 4 |
| (D) | 4 | 3 | 2 | 1 |

Key : (A)

UGC Junior Research Fellowship and Lectureship Eligibility Test, 2009 Solved Paper

Teaching and Research Aptitude

General Paper-I

- Who is given the credit of carrying Jainism to South India ?
(A) Bhadrabahu (B) Mayo
(C) Khizr Khan (D) None of these
- Dr. C. Rangrajan Committee is associated with—
(A) Pricing and Taxation of Petroleum Products
(B) Sales Tax
(C) Economy
(D) VAT
- Who is the Managing Director of IMF ?
(A) D. R. Betty
(B) C. R. Das
(C) Dominique Strauss Kahn
(D) D. P. Drucker
- The Foreign Exchange Reserve of India is kept in the custody of—
(A) State Bank of India
(B) Reserve Bank of India
(C) SEBI
(D) Axis Bank
- Plastic Money relates to—
(A) Credit Card and Debit Card
(B) Gold
(C) Mobile Card
(D) None of these
- MNCs stands for—
(A) Man New Company
(B) Multi National Companies
(C) Management New Costs
(D) None of these
- According to India's Census Report of 2001, the percentage of population living in the rural area is—
(A) 60% (B) 65%
(C) 72% (D) 90%
- McMohan Line divides—
(A) India and Bangladesh
(B) India and China
(C) India and Sri Lanka
(D) China and Nepal
- The Sardar Sarovar Project is built on the river—
(A) Narmada (B) Yamuna
(C) Chambal (D) Ganga
- On the bank of which river is Hyderabad City located ?
(A) Ganga (B) Musi River
(C) Chambal (D) Banas
- Who constructed Suez Canal ?
(A) Ferdinand de Lesseps
(B) Mayo
(C) Drucker P. C.
(D) None of these
- Haematology is a Study of diseases of—
(A) Blood (B) Cancer
(C) AIDS (D) None of these
- Lignite is a type of—
(A) School Building (B) Taxation
(C) Social Study (D) Coal
- The instrument used for measuring blood pressure is called—
(A) Economic order quantity
(B) Sphygmomanometer

- (C) Barometer
(D) None of these
15. Complete loss of memory is termed—
(A) Amnesia (B) Lunatic
(C) Idiot (D) None of these
16. Who won the Wimbledon Women's Tennis Championship in 2007 ?
(A) Sania Mirza (B) Prem Laxmi
(C) Venus Williams (D) None of these
17. The 2010 Commonwealth Games will be hosted by—
(A) New Delhi (India)
(B) Sri Lanka
(C) Lahore (Pakistan)
(D) Nepal
18. Who received the Wisden Award for the Indian Cricketer of the 20th Century ?
(A) Sachin Tendulkar (B) Kapil Dev
(C) Sehwag (D) None of these
19. The under 19 Cricket World Cup 2008 was won by—
(A) Sri Lanka (B) Pakistan
(C) India (D) Nepal
20. Who is the author of the book 'Pakistan The Gathering Storms' ?
(A) Benazir Bhutto (B) Ali Khan
(C) Amir Khan (D) None of these
21. Who is the Chairman of the Second Administrative Reform Commission ?
(A) M. Veerappa Moily
(B) Dr. B. S. Anand
(C) Kapil Sibal
(D) None of these
22. The First Law Minister of India was—
(A) Dr. B. R. Ambedkar
(B) L. K. Advani
(C) P. L. Sharma
(D) None of these
23. The Ad Line 'Connecting People' is linked with—
(A) Vodafone
(B) Nokia
(C) Reliance Mobile
(D) Samsung or Lexus
24. 'Seed Therapy' is related to—
(A) Detection of breast tumour
(B) Noise
(C) Eyes
(D) Blood
25. The First Indian Woman to become a Grandmaster in Chess is—
(A) P. T. Usha (B) Sania Mirza
(C) S. Vijay Laxmi (D) Kiran Bedi
26. Where was Param 10,000 developed ?
(A) Jaipur (Rajasthan)
(B) Pune
(C) Agra
(D) Delhi
27. Which is Computer Language ?
(A) COBOL (B) REPUBLIC
(C) BOOT (D) DISCO
28. BOP stands for—
(A) Business on Product
(B) Balance of Payment
(C) Book on Problem
(D) Business on Payment
29. Jamia Millia Islamia is—
(A) A University
(B) An Employment Plan
(C) A Rural Project
(D) None of these
30. Where is Samadhi of Guru Govind Singh built ?
(A) Jaipur (B) Chandigarh
(C) Nanded (D) Amritsar
31. The last Mauryan Emperor was—
(A) Chandragupta (B) Somgupta
(C) Brihadratha (D) None of these
32. The one rupee note bears the Signature of—
(A) President
(B) Governor
(C) Secretary Minister of Finance
(D) Prime Minister
33. LAN stands for—
(A) Line At News
(B) Local Area Network
(C) Life At Network
(D) None of these

34. Which is not a type of University ?
 (A) Central University
 (B) State University
 (C) Crown University
 (D) Deemed University
35. Which is the Source of Primary data ?
 (A) Books or Newspaper
 (B) Schedule
 (C) Magazine
 (D) Research Papers
36. Null Hypothesis is indicated by—
 (A) H_1 (B) H_0
 (C) PASCLE (D) DECODING
37. Which is not a Statistical tool ?
 (A) Economic order Quenting
 (B) t Test
 (C) Mean, Mode and Average
 (D) Correlation
38. Which is not a Part of Research Plan ?
 (A) Introduction of Research Problem
 (B) Objectives of Research Study
 (C) Vouching
 (D) Research hypothesis
39. Secondary data is collected from—
 (A) Schedule (B) Articles or letters
 (C) Questionnaire (D) Interview
40. Which is the highest academic qualification ?
 (A) M. Com.
 (B) M. A.
 (C) Post graduate diploma in Management
 (D) Ph.D.

Directions—(Q. 41 to 45) Study the following table carefully and answer the questions given below—

Number of Males and Females Staying in Various Societies

| Societies | Males | Females |
|-----------|-------|---------|
| A | 250 | 350 |
| B | 400 | 150 |
| C | 300 | 275 |
| D | 280 | 300 |
| E | 180 | 250 |
| F | 325 | 300 |

Percentage of Children (Males and Females) in the Societies

| Societies | Children | Male children | Female children |
|-----------|----------|---------------|-----------------|
| A | 25% | 40% | 60% |
| B | 40% | 75% | 25% |
| C | 16% | 25% | 75% |
| D | 25% | 80% | 20% |
| E | 40% | 50% | 50% |
| F | 24% | 46% | 54% |

41. What is the respective ratio of the number of adult females to the total number of female children staying in all the societies together ?
 (A) 243 : 82 (B) 112 : 71
 (C) 82 : 243 (D) None of these
42. What is the total number of female children staying in all the societies together ?
 (A) 314 (B) 433
 (C) 410 (D) None of these
43. What is the respective ratio of the total number of adult males in societies A and B together to the total number of adult males in societies E and F together ?
 (A) 75 : 79 (B) 14 : 17
 (C) 17 : 14 (D) None of these
44. What is the total number of members staying in all the societies together ?
 (A) 3520 (B) 3360
 (C) 4100 (D) None of these
45. What is the difference between the number of male children in society B and the number of male children in society F ?
 (A) 84 (B) 14
 (C) 96 (D) None of these
46. The Hirakud Project is on which of the following rivers ?
 (A) Godavari (B) Mahanadi
 (C) Damodar (D) Kosi
47. Which of the following is the smallest ocean of the World ?
 (A) Pacific (B) Indian
 (C) Atlantic (D) Arctic

48. The largest irrigation Canal in India is called the—
(A) Yamuna Canal
(B) Sirhind Canal
(C) Indira Gandhi Canal
(D) Upper Bari Doab Canal
49. Which is the management degree ?
(A) MBA
(B) MCA
(C) MSW
(D) Post graduate diploma in Tax law
50. In which City IIM is not situated ?
(A) Lucknow
(B) Delhi
(C) Indore
(D) Bangalore

Answers with Exaplanation

1. (A) 2. (A) 3. (C) 4. (B) 5. (A)
6. (B) 7. (C) 8. (B) 9. (A) 10. (B)
11. (A) 12. (A) 13. (D) 14. (B) 15. (A)
16. (C) 17. (A) 18. (B) 19. (C) 20. (A)
21. (A) 22. (A) 23. (B) 24. (A) 25. (C)
26. (B) 27. (A) 28. (B) 29. (A) 30. (C)
31. (C) 32. (C) 33. (B) 34. (C) 35. (B)
36. (B) 37. (A) 38. (C) 39. (B) 40. (D)
41. (D) Reqd. ratio = $1625 : 410$ or $325 : 82$
42. (C)
43. (C) Reqd. ratio = $(190 + 235) : (94 + 256)$
= $425 : 350 = 17 : 14$
44. (B) Reqd. number = 3360
45. (C) Reqd. diff. = $165 - 69 = 96$
46. (B) 47. (D) 48. (C) 49. (A) 50. (B)
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UGC
Junior Research Fellowship
and Lectureship Exam.,
Solved Paper
(Based on Memory)

2008
Teaching and Research Aptitude
General Paper

1. Which of the following States recorded the highest percentage of scheduled tribes in the 2001 census ?
(A) Uttar Pradesh
(B) Bihar
(C) Himachal Pradesh
(D) Punjab
(E) Haryana
2. Which of the following rivers flows between Vindhya Mountains range and Satpura mountains range ?
(A) Narmada (B) Tapti
(C) Sone (D) Chambal
(E) Ravi
3. Origin of which of the following rivers is located out of India's geographical territories ?
(A) Jhelum (B) Beas
(C) Chinab (D) Satluj
(E) Chambal
4. Coral reefs are located in which of the following countries ?
(A) Chile (B) Australia
(C) India (D) U.S.A.
(E) Indonesia
5. Up till which year is the National Afforestation Programme targeted to cover 33% of Indian land with forest ?
(A) 2008 (B) 2012
(C) 2016 (D) 2020
(E) 2018
6. Dearness is calculated on the basis of—
(A) Inflation rate (B) Tax rate
(C) Revenue (D) Deficit
(E) Agricultural production
7. Who among the following eradicated the 'Sati-custom' ?
(A) Lord Minto (B) Lord Ripon
(C) Lord Bentinck (D) Lord Layton
(E) Lord Wavell
8. G.B. Pant Sagar dam is constructed on which river ?
(A) Betwa (B) Ghaghra
(C) Kosi (D) Rihand
(E) Chambal
9. Which of the following countries is not a member of OPEC ?
(A) Algeria (B) Indonesia
(C) Malaysia (D) Nigeria
(E) All of the above
10. Which of the following is not a bird ?
(A) Bat (B) Emu
(C) Kiwi (D) Ostrich
(E) Bird
11. Iodine is accumulated in which of the following glands in human body ?
(A) Parathyroid (B) Thyroid
(C) Pituitary (D) Adrenal
(E) All of the above
12. Which of the following vitamins is helpful in the process of blood coagulation ?
(A) Vitamin A (B) Vitamin B₆
(C) Vitamin D (D) Vitamin K
(E) Vitamin C
13. Which of the following vitamins is available plentifully in guava ?
(A) Vitamin A (B) Vitamin B₁₂
(C) Vitamin C (D) Vitamin D
(E) Vitamin E

14. Who is the author of the book 'Conquest of Self' ?
 (A) Aravind Ghose
 (B) Rabindranath Tagore
 (C) Mahatma Gandhi
 (D) S. Radhakrishnan
 (E) Jawahar Lal Nehru
15. In which schedule of the Indian Constitution, there are three lists that divide the powers between the Union and the States ?
 (A) Fifth (B) Sixth
 (C) Seventh (D) Eighth
 (E) Ninth
16. In which of the following cities, there is a branch of IIT ?
 (A) Agra (B) New Delhi
 (C) Ajmer (D) Chandigarh
 (E) Rohtak
17. Which of the following courses is taught in Indian Institute of Management ?
 (A) M.B.A. (B) M.C.A.
 (C) M. Sc. (D) M.A.
 (E) M. Com.
18. Gyan Commission is related to—
 (A) Education (B) Politics
 (C) Social Service (D) Foreign Trade
 (E) All of the above
19. There is a Central University in which of the following cities ?
 (A) New Delhi (Jamia Nagar)
 (B) Aligarh
 (C) Varanasi
 (D) Hyderabad
 (E) All of the above
20. Which of the following is the higher educational commission in India ?
 (A) Central University
 (B) University Grants Commission
 (C) Technical University
 (D) Home Ministry
 (E) Education Department
21. Registration for Ph.D. degree is allowed after passing the following course—
 (A) After 10 + 2
 (B) After B.A./B. Com
 (C) After Master's degree course
 (D) After D. Litt.
 (E) At any time
22. Tata Institute of Social Sciences is located in—
 (A) Mumbai (B) Ayodhya
 (C) Patna (D) Jaipur
 (E) Kota
23. The word 'Research' Means—
 (A) Study (B) Rediscover
 (C) Education (D) Writing
 (E) Transfer
24. In research, zero hypothesis is expressed as—
 (A) H_1 (B) H_2
 (C) H_0 (D) HH
 (E) None of these
25. Research report is prepared—
 (A) Before carrying out research
 (B) After carrying out research
 (C) In the mid of research
 (D) All of the above
 (E) None of these
26. Parts of the format of the research are—
 (A) Introduction of research topic
 (B) Objective of research
 (C) Field of research
 (D) Process of research
 (E) All of the above
27. Sources to collect primary informations are—
 (A) Biography (B) Report
 (C) Newspapers (D) Diary
 (E) All of the above
28. Object of T-test in research is—
 (A) To collect the informations
 (B) To test the hypothesis
 (C) To prepare the table
 (D) To calculate
 (E) None of these
29. Income tax is the—
 (A) Direct tax (B) Indirect tax
 (C) An expenditure (D) An insurance
 (E) A law

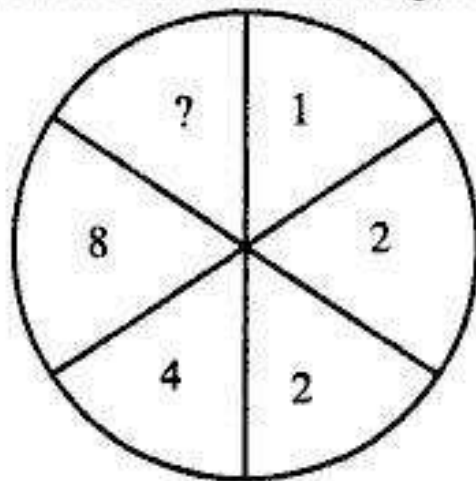
30. The following is a women university—
 (A) Jamia-Milia Islamia
 (B) Vansthali Vidyapeeth
 (C) Agra University
 (D) Punjab University
 (E) Osmania University

31. U.N.O. was formed in—
 (A) 1940 (B) 1948
 (C) 1945 (D) 1951
 (E) 1960

32. Who was the first Indian woman to scale the Mount Everest was—
 (A) Santosh Yadav (B) Bachhendri Pal
 (C) Rita Faria (D) Kunjarani
 (E) Rituparna Ghose

33. The oldest religious book is—
 (A) Yajurveda (B) Puran
 (C) Rigved (D) Ramayan
 (E) None of these

34. Which of the following numbers will replace the question-mark (?) in the figure ?



- (A) 32 (B) 16
 (C) 12 (D) 6
 (E) 9

35. Which of the following letters will replace the question-mark (?) in the given series—
 B, F, J, N, R, V, Z, D, H, L, ?
 (A) M (B) O
 (C) P (D) T
 (E) U

36. 30% of 40% of $\frac{2}{5}$ of 2500 is—
 (A) 500 (B) 400
 (C) 360 (D) 120
 (E) 109

Directions—(Q. 37–41) Read the table to answer the following questions—

Number (in thousands) of people and percentage of male, female and children in six different cities :

| City | Number of People (in thousands) | Percentage | | |
|------|------------------------------------|------------|--------|----------|
| | | Male | Female | Children |
| P | 48.35 | 38 | 36 | 26 |
| Q | 32.16 | 45 | 30 | 25 |
| R | 54.20 | 47 | 31 | 22 |
| S | 44.42 | 35 | 45 | 20 |
| T | 65.25 | 54 | 28 | 18 |
| U | 56.80 | 53 | 25 | 22 |

37. In which city the number of children is the lowest ?
 (A) R (B) S
 (C) T (D) Q
 (E) None of these

38. In sum total of the number of males in all the cities, what would be the average number of males ?

- (A) $21450 \frac{1}{3}$ (B) $23200 \frac{5}{6}$
 (C) $19445 \frac{5}{6}$ (D) $18620 \frac{2}{3}$
 (E) None of these

39. What would be the ratio of the number of femals in city R and the city T ?

- (A) 8401 : 9135 (B) 7325 : 8462
 (C) 9124 : 10131 (D) 6487 : 7758
 (E) None of these

40. What would be the percentage of people living in U city of the total population of all the cities ?

- (A) 28 (B) 11
 (C) 6 (D) 24
 (E) 19

41. What is the percentage of the females of city 3 of that of city P ?

- (A) 87.08 (B) 124.68
 (C) 114.84 (D) 92.16
 (E) None of these

42. Where will the Asian Games 2010 be organised ?
 (A) Beijing (B) Pyogyang
 (C) Gvagajahu (D) Shanghai
 (E) Seol
43. The great tennis player Bjorn Borg belongs to which of the following countries ?
 (A) Sweden (B) Australia
 (C) U.S.A. (D) Italy
 (E) Africa
44. Venugopal is associated with which of the following ?
 (A) Sujlone (B) Videocone
 (C) Ranbaxy (D) Maruti industries
 (E) Vodafone
45. The bank of the private sector is—
 (A) ICICI (B) SBI
 (C) RBI (D) PNB
 (E) UCO Bank

Directions—(Q. 46–50) Read this para-graph carefully and answer the questions given below—

Human Rights Commission is a legal body. It was constituted as a result of the act passed by the Parliament. This act was termed as 'Human Rights Act, 1993'. Its headquarter is in Delhi. The Commission is a multi-members institution, which has a Chairman and four members. Chairman of the Commission should be some retired Chief Justice of India. One member should be some working or retired judge of the Supreme Court and one member should be some working or retired Chief Justice of some High Court. Rest two members should be conversant with the human rights or having knowledge of human rights. Rather than these full time-members, there are three other members also. Chairmen and members of the National Minority Commission, National Scheduled casts and scheduled tribes Commission and National Women Commission are appointed by the President on the basis of the recommendations of a Six-member Committee headed by the Prime Minister. Present Chairman of the Nation Human Rights Commission is Shri S. Rajendra Babu.

46. National Human Rights Commission is a—
 (A) Legal body
 (B) Constitutional body

- (C) Commercial institution
 (D) All of the above
 (E) None of these

47. Under which act National Human Rights Commission was constituted ?
 (A) Contract Act, 1872
 (B) Company Act, 1956
 (C) Banking Act, 1949
 (D) Human Rights Act, 1993
 (E) All of the above
48. National Human Rights Commission consists of—
 (A) One member (B) Multi members
 (C) Two members (D) No member
 (E) None of these
49. Chairman of Human Rights Commission is—
 (A) Girija Prasad
 (B) Mrs. Advani
 (C) S. Rajendra Babu
 (D) Shri Kaul
 (E) Shri Rai
50. Chairman of the Commission is appointed by—
 (A) President (B) Prime Minister
 (C) Home Minister (D) Governor
 (E) Chief Minister

Answers with Explanations

- | | | | | |
|---------|---------------------|---------|---------|---------|
| 1. (A) | 2. (A) | 3. (D) | 4. (B) | 5. (B) |
| 6. (A) | 7. (C) | 8. (D) | 9. (C) | 10. (A) |
| 11. (B) | 12. (D) | 13. (C) | 14. (C) | 15. (C) |
| 16. (B) | 17. (A) | 18. (A) | 19. (E) | 20. (B) |
| 21. (C) | 22. (A) | 23. (B) | 24. (C) | 25. (B) |
| 26. (E) | 27. (E) | 28. (B) | 29. (A) | 30. (B) |
| 31. (C) | 32. (B) | 33. (C) | | |
| 34. (A) | $1 \times 2 = 2$ | | | |
| | $2 \times 2 = 4$ | | | |
| | $2 \times 4 = 8$ | | | |
| | $4 \times 8 = 32$ | | | |
| | $\therefore ? = 32$ | | | |

35. (C) Letters in the series are written in the advancing order of + 4.

$$36. (D) 2500 \times \frac{2}{5} \times \frac{40}{100} \times \frac{30}{100} = 120$$

37. (D) Number of children in city P

$$= \frac{48.35 \times 26}{100} \text{ Thousand}$$

$$= 12571$$

Number of children in city Q

$$= \frac{32.16 \times 25}{100} \text{ Thousand}$$

$$= 8.40$$

Number of children in city R

$$= \frac{54.20 \times 22}{100} \text{ Thousand}$$

$$= 11924$$

Number of children in city S

$$= \frac{44.42 \times 20}{100} \text{ Thousand}$$

$$= 8884$$

Number of children in city T

$$= \frac{65.25 \times 18}{100} \text{ Thousand}$$

$$= 11745$$

Number of children in city U

$$= \frac{56.80 \times 22}{100} \text{ Thousand}$$

$$= 12496$$

∴ The number of children in city Q is the least.

38. (B) Required average

$$= \frac{1}{6} \left[\frac{48.35 \times 38}{100} + \frac{32.16 \times 45}{100} + \frac{54.20 \times 47}{100} + \frac{44.42 \times 35}{100} + \frac{65.25 \times 54}{100} + \frac{56.8 \times 53}{100} \right] \text{ Thousand}$$

$$= \frac{1}{600} [1837.3 + 1447.2 + 2547.4 + 1554.7 + 3523.5 + 3010.4] \text{ Thousand}$$

$$= 23200 \frac{5}{6}$$

$$39. (A) \text{ Required ratio} = \frac{54.20 \times 31}{100} : \frac{65.25 \times 28}{100}$$

$$= 1680.2 : 1827.0$$

$$= 8401 : 9135$$

$$40. (E) \text{ Required percentage} = \frac{56.80 \times 100}{48.35 + 32.16 + 54.20 + 44.42 + 65.25 + 56.80}$$

$$= \frac{5680}{301.18}$$

$$= 19 \text{ Approximate}$$

$$41. (C) \text{ Required percentage} = \frac{44.42 \times 45}{100} \times 100$$

$$= \frac{48.35 \times 36}{100}$$

$$= \frac{1998.9}{17.406}$$

$$= 114.84$$

$$42. (C) \quad 43. (A) \quad 44. (B) \quad 45. (A) \quad 46. (A)$$

$$47. (D) \quad 48. (B) \quad 49. (C) \quad 50. (A)$$

UGC
Junior Research Fellowship
and Lectureship Exam.,
Solved Paper
(Based on Memory)

2007

General Paper-I

Teaching and Research Aptitude

1. A research problem is feasible only when—
(A) It has utility and relevance
(B) It is researchable
(C) It is new and adds something to knowledge
(D) All the above
2. Micro teaching is most effective for the student-teacher—
(A) During the practice-teaching
(B) After the practice-teaching
(C) Before the practice-teaching
(D) None of the above
3. Teacher uses visual-aids to make learning—
(A) Simple
(B) More knowledgeable
(C) Quicker
(D) Interesting
4. Which is the least important factor in teaching ?
(A) Punishing the students
(B) Maintaining discipline in the class
(C) Lecturing in impressive way
(D) Drawing sketches and diagrams on the black-board
5. Bibliography given in a research report—
(A) Shows vast knowledge of the researcher
(B) Helps those interested in further research
(C) Has no relevance to research
(D) All the above
6. Fundamental research reflects the ability to—
(A) Synthesize new ideals
(B) Expound new principles
(C) Evaluate the existing material concerning research
(D) Study the existing literature regarding various topics
7. To test null hypothesis, a researcher uses—
(A) t test
(B) ANOVA
(C) χ^2
(D) Factorial analysis
8. Which one of the following teachers would you like the most ?
(A) Punctual
(B) Having research aptitude
(C) Loving and having high idealistic philosophy
(D) Who often amuses his students
9. The teacher's role at the higher educational level is to—
(A) Provide information to students
(B) Promote self-learning in students
(C) Encourage healthy competition among students
(D) Help students to solve their personal problems
10. The study in which the investigators attempt to trace an effect is known as—
(A) Survey Research
(B) 'Ex-post Facto' Research
(C) Historical Research
(D) Summative Research

Directions—(Q. 11-15) Read the following passage and answer the questions—

All political systems need to mediate the relationship between private wealth and public power. Those that fail risk a dysfunctional government captured by wealthy interests. Corruption is one symptom of such failure with private willingness-to-pay trumping public goals. Private individuals and business firms pay to get routine services and to get to the head of the bureaucratic queue. They pay to limit their taxes, avoid costly regulations, obtain contracts at inflated prices and

get concessions and privatised firms at low prices. If corruption is endemic, public officials—both bureaucrats and elected officials may redesign programmes and propose public projects with few public benefits and many opportunities for private profit. Ofcourse, corruption, in the sense of bribes, pay-offs and kickbacks, is only one type of government failure. Efforts to promote 'good governance' must be broader than anti-corruption campaigns. Governments may be honest but inefficient because no one has an incentive to work productively, and narrow elites may capture the state and exert excess influence on policy. Bribery may induce the lazy to work hard and permit those not in the inner circle of cronies to obtain benefits. However, even in such cases, corruption cannot be confined to 'functional' areas. It will be a temptation whenever private benefits are positive. It may be a reasonable response to a harsh reality but, over time, it can facilitate a spiral into an even worse situation.

11. Productivity linked incentives to public/private officials is one of the indicatives for—
 - (A) Efficient government
 - (B) Bad governance
 - (C) Inefficient government
 - (D) Corruption
12. The governments which fail to focus on the relationship between private wealth and public power are likely to become—
 - (A) Functional
 - (B) Dysfunctional
 - (C) Normal functioning
 - (D) Good governance
13. One important symptom of bad governance is—
 - (A) Corruption
 - (B) High taxes
 - (C) Complicated rules and regulations
 - (D) High prices
14. The spiralling corruption can only be contained by promoting—
 - (A) Private profit
 - (B) Anti-corruption campaign
 - (C) Good governance
 - (D) Pay-offs and kick backs
15. When corruption is rampant, public officials always aim at many opportunities for—
 - (A) Public benefits
 - (B) Public profit
 - (C) Private profit
 - (D) Corporate gains
16. 'E' denotes—
 - (A) Universal Negative Proposition
 - (B) Particular Affirmative Proposition
 - (C) Universal Affirmative Proposition
 - (D) Particular Negative Proposition
17. Feed-back of a message comes from—
 - (A) Satellite
 - (B) Media
 - (C) Audience
 - (D) Communicator.
18. Circle graphs are used to show—
 - (A) How various sections share in the whole
 - (B) How various parts are related to the whole
 - (C) How one whole is related to other wholes
 - (D) How one part is related to other parts
19. If in a certain language TRIVANDRUM is coded as 2 5 9 5 3 5 4 7 5 8, how would MADRAS be coded ?
 - (A) 8 3 4 5 3 6
 - (B) 8 3 4 5 3 8
 - (C) 8 3 4 5 3 0
 - (D) 8 3 4 5 3 9
20. The question to be answered by factorial analysis of the quantitative data **does not** explain one of the following—
 - (A) Is 'X' related to 'Y' ?
 - (B) How is 'X' related to 'Y' ?
 - (C) How does 'X' affect the dependent variable 'Y' at different levels of another independent variable 'K' or 'M' ?
 - (D) How is 'X' by 'K' related to 'M' ?
21. Adjusting the photo for publication by cutting is technically known as—
 - (A) Photo cutting
 - (B) Photo bleeding
 - (C) Photo cropping
 - (D) Photo adjustment
22. Value education makes a student—
 - (A) Good citizen
 - (B) Successful businessman
 - (C) Popular teacher
 - (D) Efficient manager

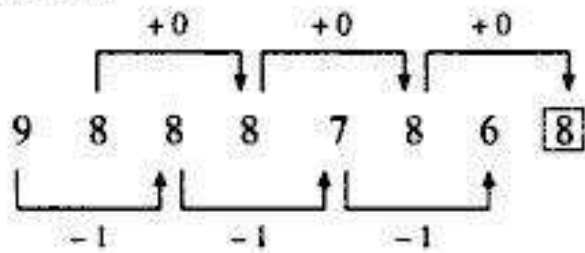
23. On the keyboard of computer each character has an 'ASCII' value which stands for—
 (A) American Stock Code for Information Interchange
 (B) American Standard Code for Information Interchange
 (C) African Standard Code for Information Interchange
 (D) Adaptable Standard Code for Information Change
24. A Syllogism must have—
 (A) Three propositions
 (B) Four propositions
 (C) Six propositions
 (D) Five propositions
25. The process of laying out a document with text, graphics, headlines and photographs is involved in—
 (A) Deck Top Publishing
 (B) Desk Top Printing
 (C) Desk Top Publishing
 (D) Deck Top Printing
26. From the given four statements, select the two which cannot be true but yet both can be false. Choose the right pair—
 (i) All men are mortal
 (ii) Some men are mortal
 (iii) No man is mortal
 (iv) Some men are not mortal
 (A) (i) and (ii) (B) (iii) and (iv)
 (C) (i) and (iii) (D) (ii) and (iv)
27. Which of the natural hazards have big effect on Indian people each year ?
 (A) Cyclones (B) Floods
 (C) Earthquakes (D) Landslides
28. The Government established the University Grants Commission by an Act of Parliament in the year—
 (A) 1980 (B) 1948
 (C) 1950 (D) 1956
29. Which is the number that comes next in the sequence ?
 9, 8, 8, 8, 7, 8, 6,
 (A) 5 (B) 6
 (C) 8 (D) 4
30. 'A' is the father of 'C', and 'D' is the son of 'B'. 'E' is the brother of 'A'. If 'C' is the sister of 'D', how is 'B' related to 'E' ?
 (A) Daughter (B) Husband
 (C) Sister-in-law (D) Brother-in-law
31. Copula is that part of proposition which denotes the relationship between—
 (A) Subject and predicate
 (B) Known and unknown
 (C) Major premise and minor premise
 (D) Subject and object
32. The plume rise in a coal based power plant depends on—
 (i) Buoyancy
 (ii) Atmospheric stability
 (iii) Momentum of exhaust gases
 Identify the correct code—
 (A) (i) and (ii) only
 (B) (ii) and (iii) only
 (C) (i) and (iii) only
 (D) (i), (ii) and (iii)
33. Networking of libraries through electronic media is known as—
 (A) Infilbnet (B) Libinfnet
 (C) Internet (D) HTML
34. Which of the following methods will you choose to prepare choropleth map of India showing urban density of population ?
 (A) Quartiles (B) Quintiles
 (C) Mean and SD. (D) Break-point
35. Universities having central campus for imparting education are called—
 (A) Central Universities
 (B) Deemed Universities
 (C) Residential Universities
 (D) Open Universities
36. Which of the following methods is best suited to show on a map the types of crops being grown in a region ?
 (A) Choropleth (B) Chorochromatic
 (C) Choroschematic (D) Isopleth
37. The aspect ratio of TV screen is—
 (A) 4 : 3 (B) 4 : 2
 (C) 3 : 5 (D) 2 : 3

38. Collection of information in advance before designing communication strategy is known as—
 (A) Feed-back
 (B) Feed-forward
 (C) Research study
 (D) Opinion poll
39. Press Council of India is located at—
 (A) Chennai (B) Mumbai
 (C) Kolkata (D) Delhi
40. Out of four numbers, the average of the first three numbers is thrice the fourth number. If the average of the four numbers is 5, the fourth number is—
 (A) 4.5 (B) 5
 (C) 2 (D) 4
41. How many Mondays are there in a particular month of a particular year, if the month ends on Wednesday ?
 (A) 5
 (B) 4
 (C) 3
 (D) None of the above
42. January 12, 1980 was Saturday, what day was January 12, 1979 ?
 (A) Saturday (B) Friday
 (C) Sunday (D) Thursday
43. Transfer of data from one application to another line is known as—
 (A) Dynamic Disk Exchange
 (B) Dodgy Data Exchange
 (C) Dogmatic Data Exchange
 (D) Dynamic Data Exchange
44. Which part of the Central Processing Unit (CPU) performs calculation and makes decisions ?
 (A) Arithmetic Logic Unit
 (B) Alternating Logic Unit
 (C) Alternate Local Unit
 (D) American Logic Unit
45. Tsunami occurs due to—
 (A) Mild earthquakes and landslides in the oceans
 (B) Strong earthquakes and landslides in the oceans
 (C) Strong earthquakes and landslides in mountains
 (D) Strong earthquakes and landslides in deserts
46. 'Dpi' stands for—
 (A) Dots per inch
 (B) Digits per unit
 (C) Dots pixel inch
 (D) Diagrams per inch
47. A ratio represents the relation between—
 (A) Part and Part
 (B) Part and Whole
 (C) Whole and Whole
 (D) All of the above
48. Comparative Environment Impact Assessment study is to be conducted for—
 (A) The whole year
 (B) Three seasons excluding monsoon
 (C) Any three seasons
 (D) The worst season
49. Sea level rise results primarily due to—
 (A) Heavy rainfall
 (B) Melting of glaciers
 (C) Submarine volcanism
 (D) Seafloor spreading
50. The University which telecasts interactive educational programmes through its own channel is—
 (A) B. R. Ambedkar Open University, Hyderabad
 (B) I. G. N. O. U.
 (C) University of Pune
 (D) Annamalai University

Answers with Hints

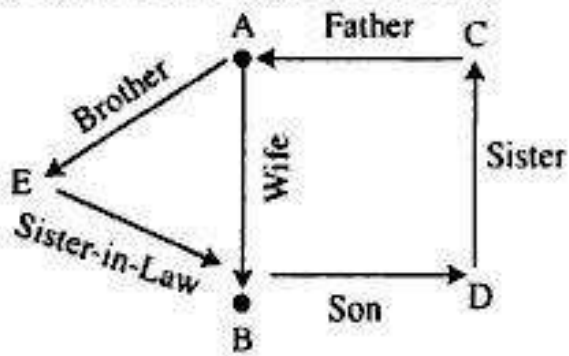
- | | | | | |
|---------|---------|---------|---------|---------|
| 1. (D) | 2. (A) | 3. (D) | 4. (A) | 5. (A) |
| 6. (B) | 7. (B) | 8. (B) | 9. (B) | 10. (B) |
| 11. (A) | 12. (B) | 13. (A) | 14. (C) | 15. (C) |
| 16. (A) | 17. (C) | 18. (B) | 19. (A) | 20. (D) |
| 21. (C) | 22. (A) | 23. (B) | 24. (A) | 25. (C) |
| 26. (D) | 27. (B) | 28. (D) | | |

29. (C) The sequence of the given series will be as follows—



Hence, the number '8' will come next in the sequence.

30. (C) According to question,



Hence 'B' is the **Sister-in-Law** of 'E'.

31. (A) 32. (B) 33. (A) 34. (A) 35. (A)
 36. (A) 37. (A) 38. (D) 39. (D)
 40. (C) Let the numbers are a, b, c and d then according to question,

$$\frac{a+b+c}{3} = 3d$$

$$\Rightarrow a+b+c = 9d \quad \dots(i)$$

and $\frac{a+b+c+d}{4} = 5$

$$\Rightarrow a+b+c+d = 20 \quad \dots(ii)$$

On putting the value of equation (i) into equation (ii),

$$9d + d = 20$$

$$\Rightarrow 10d = 20$$

$$\therefore d = 2$$

41. (B) 42. (B) 43. (D) 44. (A) 45. (B)
 46. (A) 47. (D) 48. (A) 49. (B) 50. (B)

UGC
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Solved Paper
(Based on Memory)

2006
General Paper-I
Teaching and Research Aptitude

1. Which of the two given options is of the level of understanding ?
 1. Define noun.
 2. Define noun in your own words.

(A) Only 1
 (B) Only 2
 (C) Both 1 and 2
 (D) Neither 1 nor 2
2. The depth of any research can be judged by :

(A) Title of the research
 (B) Objectives of the research
 (C) Total expenditure on the research
 (D) Duration of the research
3. Match List-I (Interviews) with List-II (Meaning) and select the correct answer from the code given below :

List-I
 (Interviews)

(a) Structured interviews
 (b) Unstructured interviews
 (c) Focussed interviews
 (d) Clinical interviews

List-II
 (Meaning)

 1. Greater flexibility approach
 2. Attention on the questions to be answered
 3. Individual life experience
 4. Pre-determined question
 5. Non-directive

Codes :

| | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 4 | 1 | 2 | 3 |
| (B) | 2 | 4 | 1 | 3 |
| (C) | 5 | 2 | 4 | 1 |
| (D) | 1 | 3 | 5 | 4 |
4. Which of the following options are the main tasks of research in modern society ?
 1. To keep pace with the advancement in knowledge.
 2. To discover new things.
 3. To write a critique on the earlier writings.
 4. To systematically examine and critically analyse the investigations/sources with objectivity.

(A) 4, 2 and 1 (B) 1, 2 and 3
 (C) 1 and 3 (D) 2, 3 and 4
5. One of the aims of the scientific method in research is to :

(A) Improve data interpretation
 (B) Eliminate spurious relations
 (C) Confirm triangulation
 (D) Introduce new variables
6. The first Indian chronicler of Indian history was :

(A) Megasthenese (B) Fahiyani
 (C) Huan Tsang (D) Kalhan
7. What do you consider as the main aim of interdisciplinary research ?

(A) To bring out holistic approach to research
 (B) To reduce the emphasis of single subject in research domain
 (C) To over simplify the problem of research
 (D) To create a new trend in research methodology
8. Which of the following statements is most appropriate ?

(A) Teachers can teach
 (B) Teachers help can create in a student a desire to learn
 (C) Lecture Method can be used for developing thinking
 (D) Teachers are born

9. Which of the following statements is correct ?
 (A) Syllabus is a part of curriculum.
 (B) Syllabus is an annexure to curriculum
 (C) Curriculum is the same in all educational institutions affiliated to a particular university
 (D) Syllabus is not the same in all educational institutions affiliated to a particular university.
10. Which of the following comprise teaching skill ?
 (A) Black Board writing
 (B) Questioning
 (C) Explaining
 (D) All the above
- Directions**—(Q. 11–15) The superintendence, direction and control of preparation of electoral rolls for, and the conduct of, elections to Parliament and State Legislatures and elections to the offices of the President and the Vice-President of India are vested in the Election Commission of India. It is an independent constitutional authority.
- Independence of the Election Commission and its insulation from executive interference is ensured by a specific provision under Article 324(5) of the constitution that the Chief Election Commissioner shall not be removed from his office except in like manner and on like grounds as a Judge of the Supreme Court and conditions of his service shall not be varied to his disadvantage after his appointment.
- In C.W.P. No. 4912 of 1998 (Kushra Bharat Vs. Union of India and others), the Delhi High Court directed that information relating to Government dues owed by the candidates to the departments dealing with Government accommodation, electricity, water, telephone and transport etc. and any other dues should be furnished by the candidates and this information should be published by the election authorities under the commission.
11. The Chief Election Commissioner can be removed from his office under Article :
 (A) 125 (B) 352
 (C) 226 (D) 324
12. According to the passage, the Election Commission is an independent constitutional authority. This is under Article No. :
 (A) 324 (B) 356
 (C) 246 (D) 161
13. The text of the passage reflects or raises certain questions :
 (A) The authority of the commission can not be challenged
 (B) This would help in stopping the Criminalization of Indian politics
 (C) This would reduce substantially the number of contesting candidates
 (D) This would ensure fair and free elections
14. Independence of the Commission means :
 (A) Have a constitutional status
 (B) Have legislative powers
 (C) Have judicial powers
 (D) Have political powers
15. Fair and free election means :
 (A) Transparency
 (B) To maintain law and order
 (C) Regional considerations
 (D) Role for pressure groups
16. Which of the following institutions in the field of education is set up by the MHRD Government of India ?
 (A) Indian Council of World Affairs, New Delhi
 (B) Mythic Society, Bangalore
 (C) National Bal Bhawan, New Delhi
 (D) India International Centre, New Delhi
17. Tamil Nadu coastal belt has drinking water shortage due to :
 (A) High evaporation
 (B) Sea water flooding due to tsunami
 (C) Over exploitation of ground water by tubewells
 (D) Seepage of sea water
18. Use of an ordinary telephone as an Internet appliance is called :
 (A) Voice net
 (B) Voice telephone
 (C) Voice line
 (D) Voice portal
19. Networked media exist in interconnected :
 (A) Social environments
 (B) Economic environments
 (C) Political environments
 (D) Technological environments

20. Insert the missing number :

$$\frac{16}{32}, \frac{15}{33}, \frac{17}{31}, \frac{14}{34}, ?$$

- (A) $\frac{19}{35}$ (B) $\frac{19}{30}$
 (C) $\frac{18}{35}$ (D) $\frac{18}{30}$
21. At what time between 4 and 5 O'clock will the hands of a watch point in opposite directions ?
 (A) 45 min. past 4
 (B) 40 min. past 4
 (C) $50\frac{4}{11}$ min. past 4
 (D) $54\frac{6}{11}$ min. past 4
22. Who among the following can be asked to make a statement in Indian Parliament ?
 (A) Any MLA
 (B) Chief of Army Staff
 (C) Solicitor General of India
 (D) Mayor of Delhi
23. Monday falls on 20th March, 1995. What was the day on 3rd November, 1994 ?
 (A) Thursday (B) Sunday
 (C) Tuesday (D) Saturday
24. Using websites to pour out one's grievances is called :
 (A) Cyberventing
 (B) Cyber ranting
 (C) Web hate
 (D) Web plea
25. The function of mass communication of supplying information regarding the processes, issues, events and societal developments is known as :
 (A) Content supply
 (B) Surveillance
 (C) Gratification
 (D) Correlation
26. While all rivers of Peninsular India flow into the Bay of Bengal, Narmada and Tapti flow into the Arabian Sea because these two rivers :
 (A) Follow the slope of these rift valleys
 (B) The general slope of the Indian peninsula is from East to West
 (C) The Indian peninsula North of the Satpura ranges, is tilted towards the West
 (D) The Indian peninsula South of the Satpura ranges is tilted towards East
27. In web search, finding a large number of documents with very little relevant information is termed :
 (A) Poor recall
 (B) Web crawl
 (C) Poor precision rate
 (D) Poor web response
28. The average of four consecutive even numbers is 27. The largest of these numbers is :
 (A) 36 (B) 32
 (C) 30 (D) 28
29. Video transmission over the Internet that looks like delayed livecasting is called :
 (A) Virtual video
 (B) Direct broadcast
 (C) Video shift
 (D) Real-time video
30. Ministry of Human Resource Development (HRD) includes :
 (A) Department of Elementary Education and Literacy
 (B) Department of Secondary Education and Higher Education
 (C) Department of Women and Child Development
 (D) All of the above
31. **Direction for this question**—Given below are two statements (a) and (b) followed by two conclusions (1) and (2). Considering the statements to be true, indicate which of the following conclusions logically follow from the given statements by selecting one of the four response alternatives given below the conclusion :
Statements—
 (a) All businessmen are wealthy.
 (b) All wealthy people are hard working.
Conclusions—
 1. All businessmen are hard working.
 2. All hardly working people are not wealthy.
 (A) Only 1 follows

- (B) Only 2 follows
(C) Both 1 and 2 follows
(D) Neither 1 nor 2 follows
32. Which of the following conclusions is logically valid based on statement given below?
Statement—Most teachers are hard working.
Conclusions—
1. Some teachers are hard working.
2. Some teachers are not hard working.
(A) Only 1 is implied
(B) Only 2 is implied
(C) Both 1 and 2 are implied
(D) Neither 1 nor 2 is implied
33. Water is always involved with landslides. This is because it :
(A) Reduces the shear strength of rocks
(B) Increases the weight of the overburden
(C) Enhances chemical weathering
(D) Is a universal solvent
34. The concept of connect intelligence is derived from :
(A) Virtual reality
(B) Fuzzy logic
(C) Bluetooth technology
(D) Value added networks
35. 'SITE' stands for :
(A) System for International Technology and Engineering
(B) Satellite Instructional Television Experiment
(C) South Indian Trade Estate
(D) State Institute of Technology and Engineering
36. In a certain code, FHQK means GIRL. How will WOMEN be written in the same code ?
(A) VNLDM (B) FHQKN
(C) XPNFO (D) VLNDM
37. Soils in the Mahanadi delta are less fertile than those in the Godavari delta because of :
(A) Erosion of top soils by annual floods
(B) Inundation of land by sea water
(C) Traditional agriculture practices
(D) The derivation of alluvial soil from red-soil hinterland
38. What is the name of Research station established by the Indian Government for 'Conducting Research at Antarctic' ?
(A) Dakshin Gangotri
(B) Yamunotri
(C) Uttari Gangotri
(D) None of the above
39. The science of the study of feedback systems in humans, animals and machines is known as :
(A) Cybernetics
(B) Reverse communication
(C) Selectivity study
(D) Response analysis
40. Which is the smallest North-East State in India ?
(A) Tripura (B) Meghalaya
(C) Mizoram (D) Manipur
41. Which of the following conclusions is logically valid based on statement given below?
Statement—Most of the Indian states existed before independence.
Conclusions—
1. Some Indian States existed before independence.
2. All Indian States did not exist before independence.
(A) Only 1 is implied
(B) Only 2 is implied
(C) Both 1 and 2 are implied
(D) Neither 1 nor 2 is implied
42. Parliament can legislate on matters listed in the State list :
(A) With the prior permission of the President
(B) Only after the constitution is amended suitably
(C) In case of inconsistency among State legislatures
(D) At the request of two or more States
43. A dialogue between a humanbeing and a computer programme that occurs simultaneously in various forms is described as :
(A) Man-machine speak
(B) Binary chat
(C) Digital talk
(D) Interactivity

44. **Assertion (A)**—Aerosols have potential for modifying climate.

Reason (R)—Aerosols interact with both short waves and radiation.

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

45. The combination of computing, telecommunications and media in a digital atmosphere is referred to as :

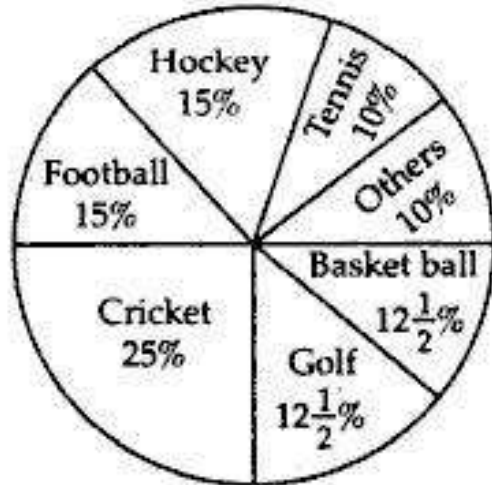
(A) Online communication

(B) Integrated media

(C) Digital combine

(D) Convergence

Directions—(Q. 46–50) **Not for Visually Handicapped Candidates**—The following pie chart indicates the expenditure of a country on various sports during a particular year. Study the pie chart and answer it Question Number 46 to 50.



46. The chart shows that the most popular game of the country is ?

(A) Hockey (B) Football

(C) Cricket (D) Tennis

47. Out of the following country's expenditure is the same on :

(A) Hockey and Tennis

(B) Golf and Basket Ball

(C) Cricket and Football

(D) Hockey and Golf

48. The ratio of the total expenditure on football to that of expenditure on hockey is :

(A) 1 : 15 (B) 1 : 1

(C) 15 : 1 (D) 3 : 20

49. If the total expenditure on sports during the year was Rs. 1,20,00,000 how much was spent on basket ball ?

(A) Rs. 9,50,000 (B) Rs. 10,00,000

(C) Rs. 12,00,000 (D) Rs. 15,00,000

50. If the total expenditure on sport during the year was Rs. 1,50,00,000 the expenditure on cricket and hockey together was :

(A) Rs. 60,00,000 (B) Rs. 50,00,000

(C) Rs. 37,50,000 (D) Rs. 25,00,000

For Visually Handicapped Students Only

46. Which of the following contains 3/4 of the available fresh water in the world ?

(A) Lakes (B) River water

(C) Glaciers (D) Ground water

47. Which continent comprises 30% of the land area of the earth ?

(A) Australia

(B) Asia

(C) South America

(D) Europe

48. Which one of the following objectives is not included in the 73rd Constitutional Amendment of India ?

(A) To increase the productivity of the land

(B) To reduce regional disparity in development

(C) To generate employment

(D) To provide essential infrastructure facilities and amenities to the people

49. Corporative EIA (Environmental Impact Assessment) is to be conducted for :

(A) The whole year

(B) The moist season

(C) Any three seasons

(D) Three seasons excluding monsoon

50. It is believed that our globe is warming progressively. This global warming will eventually result in :

(A) Melting of the polar ice

(B) Uniformity of climate at equator and pole

(C) Full in sea level

(D) Increase in availability of usable land

Answers with Hints

1. (B) Human cognition is having three levels of thinking process viz. Memory Level; Understanding Level; and Reflective Level. Among these, Memory level is related to Recall and Recognition of the concept but its higher level is associated with ASSIMILATION and ABSORPTION of the content hence the Alternative 'B' reflects the understanding level in clear terms.
2. (B)
3. (A) Here the alternative 'A' is correct because :
 - (a) Structured interview is having everything preplanned in advance like—Interviewer Plan, Time, No. of Questions to be asked etc.
 - (b) Unstructured interview as its name suggest and just opposite to above have full fledged flexibility on the part of interviewer like—Place, Time, open/closed ended Questions on limited to formal talks.
 - (c) Focussed interview in some-what detective type conversation to arrive at some definite conclusion related to taboos/problems/performances etc.
 - (d) Clinical interview is conducted for diagnosing problems whether in conscious/unconscious state of human mind in order to provide some sort of remedial programme.
4. (A) Here the alternative 'A' is most suitable answer to the stem of question because in modern society, the research has three basic roles to play :
 - (i) The students whether in pure sciences/social sciences have been trained in scientific methodology in order to keep/develop the adequate potentiality of scientific Attitude towards life, man and society. That's why a realistic training has been imparted in Labs/Fieldwork/Through preparation of reports.
 - (ii) It is an era of vertical progress in science and only the person having scientific bent of mind may find himself more interactive/manipulative in the ongoing society.
 - (iii) The task of research is also to satisfy timeless inquisitiveness of human mind, therefore, it is also having discovery-oriented approach.
5. (B) 6. (D)
7. (A) Inter-disciplinary approach of research is the latest innovation in the field and believes that the elements of scientific phenomenon must be dealt in integrated form instead of disintegrated form to bring out the concept in its HOLISTIC point of view. For example, Students school problems may be surveyed by a team of researchers to digout its depth like—an Educationist, class-room teacher, Doctor Clinical Psychologist, Counsellor, Guidance worker and a Social worker. It gives a detailed mapping plan of all the difficulties lying with the students simultaneously.
8. (B) Teacher does not play only a information mongering role in the classroom but to instill and infuse the inspiration in the students in order to bring desirable changes in future and make him an ideal citizen.
9. (A) Curriculum is a wider term consisting academic and non-academic part of all activities within the school premises. The syllabus belongs to only its academic part pertaining to C/R teaching-learning process.
10. (D) All the above are the teaching skills without them a teacher is like a without gun in a battlefield.
11. (D) 12. (A) 13. (D) 14. (A) 15. (B)
16. (C) 17. (D) 18. (C) 19. (D) 20. (D)
21. (D) 22. (C) 23. (A) 24. (A) 25. (A)
26. (A) 27. (A)
28. (C) The four consecutive even numbers

$$= x, x + 2, x + 4, x + 6$$

$$\therefore \frac{x + x + 2 + x + 4 + x + 6}{4} = 27$$

$$\Rightarrow \frac{4x + 12}{4} = 27$$

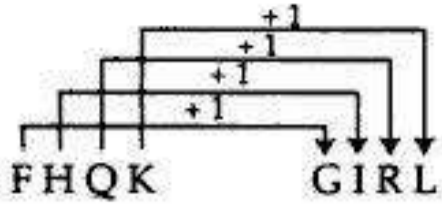
$$\Rightarrow 4x = 108 - 12$$

$$x = \frac{96}{4} = 24$$
 Hence, the largest number

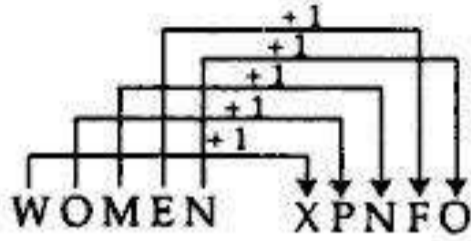
$$= x + 6$$

$$= 24 + 6 = 30$$
29. (D) 30. (D) 31. (A) 32. (C) 33. (B)
34. (D) 35. (B)

36. (C)



Similarly,



37. (A) 38. (A) 39. (A) 40. (C) 41. (B)
 42. (D) 43. (D) 44. (A) 45. (D) 46. (C)
 47. (B) 48. (B)
 49. (D) 12.5% of Rs. 1,20,00,000 is Rs. 15,00,000.
 50. (A) Cricket and Hockey together get the share 25% + 15% = 40% and 40% of Rs. 1,50,00,000 is Rs. 60,00,000.

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46. (B) 47. (B) 48. (A) 49. (A) 50. (A)

REASONING TEST

Relationship or Analogy Test

In this type of test, an effort is made to establish relationship between the two objects. Two objects related in some way are given and third object is also given with four or five alternative answers. The candidates are required to find out which one of the alternatives bears the same relation with the third object as first and second objects are related.

Example 1. Man : Walk :: Fish : ?

- (A) Swim (B) Eat
(C) Live (D) Sleep
(E) Fly

Answer with Explanation—(A). As a man covers some distance after walking in the same man a fish covers some distance after swimming. Hence the correct answer is (A).

Example 2. 'Glove' is to 'Hand' as 'Hat' is to :

- (A) Cloth (B) Cap
(C) Head (D) Hair
(E) Eyes

Answer with Explanation—(C). Since 'Glove' is worn on the 'Hand', in the same way 'Hat' is worn on the 'Head'. Hence the correct answer is 'C'.

Example 3. If PRLN : XZTV :: JLFH : ?

Which one of the answers would replace the question mark ?

- (A) NPRT (B) NRPT
(C) NTRP (D) RTNP
(E) RPNT

Answer with Explanation—(D). In the first term one letter is missing between the third and fourth letters, one letter is missing between the fourth and first letters and one letter is missing

between first and second letters. The same order will be applied in all other terms.

Example 4. If ? : Vegetable :: Wheat : ?

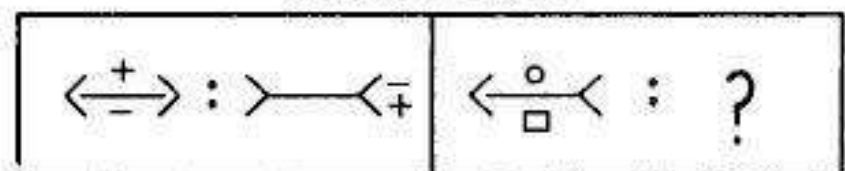
Which one of the following is the correct pair for question marks ?

- (A) Plant, Cake (B) Barley, Flour
(C) Cabbage, Corn (D) Leaves, Rice

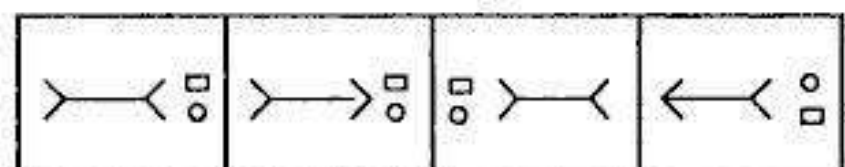
Answer with Explanation—(C). As Cabbage is one kind of vegetable in the same manner wheat is one kind of corn. Hence both the words of (C) are fit to fill the places of question marks.

Example 5. In the following question, three problem figures are followed by four answer figures. In place of the fourth problem figure there is a question mark. Which one of the answer figures would occupy the place of question mark so that there must be the same relation between the first and second problem figures as that between the third and fourth problem figures.

Problem Figure



Answer Figure



- (A) (B) (C) (D)

Answer with Explanation—(B). The arrows at the ends of the line in fig. (1) are reversed and are touching the line in fig. (2). Besides that the signs of + and - which are on the opposite sides of the line in fig. (1) come together on the right end and plus sign comes down while minus sign goes

up. On the basis of the changes given above fig. (B) comes on the place of question mark.

Example 6. Which answer would replace the question mark ?

? is to Bile as Gland is to ?

- (A) Gall-bladder, Hormone
- (B) Kidney, Blood
- (C) Spleen, Phlegm
- (D) Liver, Urine

Answer with Explanation—(A). As from gall-bladder, bile comes out in the same manner from gland, hormone comes out.

Exercise 1

Directions—For each of the following questions, there exists a certain relation between the first two words. The same relation also exists in the third and fourth words. Out of these four words, one word is missing. The place of the missing word is shown by question mark. Find out the missing word from the five words given below in each question.

1. Air : Atmosphere :: Water : ?
(A) Island (B) Earth
(C) Ocean (D) Drop
(E) Dew
2. Mother : Daughter :: Father : ?
(A) Son (B) Brother
(C) Boy (D) Sister
(E) Grandfather
3. Obey : Defy :: Work : ?
(A) Lazy (B) Rest
(C) Idle (D) Labour
(E) Challenge
4. Light : Sun :: Heat : ?
(A) Electricity (B) Moon
(C) Fire (D) Stars
(E) Ice
5. Oil : Lamp :: Wax : ?
(A) Bulb (B) Candle
(C) Light (D) Dark
(E) Smooth
6. Parrot : Cage :: Man : ?
(A) Home (B) Life
(C) House (D) Prison
(E) Forest
7. Pen : Ink :: Pencil : ?
(A) Knife (B) Write
(C) Lead (D) Chalk
(E) Wood
8. Trouble : Safety :: Freedom : ?
(A) Independence (B) Slavery
(C) Liberty (D) Patient
(E) Healthy
9. Sickness : Health :: Happiness : ?
(A) Medicine (B) Misery
(C) Comfort (D) Sorrow
(E) Beautifulness
10. Bee : Honey :: Cow : ?
(A) Animal (B) Grass
(C) Milk (D) Water
(E) Leather
11. Ocean : Pond :: Deep : ?
(A) River (B) Shallow
(C) Canal (D) Clean
(E) Dirty
12. ? : Simple :: Abstract : Concrete
(A) Specific (B) Hard
(C) Procedure (D) Complex
(E) None of these
13. Walk : Run :: Breeze : ?
(A) Cold (B) Fast
(C) Wind (D) Breathe
(E) Air
14. Factory : Production :: School : ?
(A) Teachers (B) Students
(C) Building (D) Discipline
(E) Education
15. House : Wall :: Wall : ?
(A) Cement (B) Sand
(C) Roof (D) Brick
(E) Paint
16. Cardboard : Opaque :: Glass : ?
(A) Brittle (B) Glossy

- (C) Transparent (D) Hard
(E) Lustrous
17. Soft : Sponge :: Sharp : ?
(A) Blunt (B) Cut
(C) Pierce (D) Edge
(E) Knife
18. Pupil : Class :: Bead : ?
(R. B. I. Officer Jan. 1988)
(A) Necklace (B) Ornament
(C) Jewellery (D) Gold
(E) Ring
19. Entrance : Exit :: Loyalty : ?
(A) Falsehood (B) Disrespect
(C) Dishonesty (D) Truth
(E) Treachery
20. Chapter : Book :: Flower : ?
(A) Plant (B) Bud
(C) Letter (D) Garden
(E) Bouquet
21. Disease : Pathology :: Planets : ?
(A) Sun (B) Satellite
(C) Astrology (D) Astronomy
(E) Class
22. Ankle : Knee :: Wrist : ?
(A) Elbow (B) Hand
(C) Finger (D) Foot
(E) None of these
23. Army : Soldier :: Galaxy : ?
(A) Planet (B) Satellite
(C) Meteor (D) Universe
(E) Star
24. Doctor : Medicine :: Teacher : ?
(A) Class (B) Student
(C) College (D) Lecture
(E) Black Board
25. Statue : Size :: Song : ?
(A) Words (B) Beauty
(C) Tune (D) Poetry
(E) Singer
26. Sorrow : Joy :: Pleasure : ?
(A) Feat (B) Anger
- (C) Hatred (D) Pain
(E) Jealousy
27. Dark : Light :: Black : ?
(A) White (B) Night
(C) Day (D) Dark
(E) Grey
28. Metre : ? :: Litre : Volume
(A) Weight (B) Pressure
(C) Length (D) Area
(E) Density
29. Circle : ? :: Sphere : Cube
(A) Round (B) Square
(C) Ring (D) Corners
(E) Radius
30. Ornithologist : Bird :: Anthropologist : ?
(A) Animals (B) Insects
(C) Minerals (D) Mankind
(E) Environment
31. Step : Staircase :: Soldier : ?
(A) Rifle (B) War
(C) Army (D) Bravery
(E) Uniform
32. Ancient : Modern :: Often : ?
(A) Seldom (B) Frequent
(C) Always (D) Never
(E) Regular
33. ? : BEE :: FANG : SNAKE
(A) Flying (B) Humming
(C) Honey (D) Sting
(E) Wax
34. ? : Graceful :: Vulgarly : Elegance
(A) Plain (B) Awkward
(C) Asperity (D) Comely
(E) Ugly
35. ? : Copy :: Invent : Imitate
(A) Discovery (B) Inquiry
(C) Draw (D) Original
(E) Foundation

6 / Reasoning

36. ? : Giraffe :: Australia : Kangaroo
(A) India (B) Antarctica
(C) Africa (D) France
(E) Japan
37. ? : Light :: Dusk : Dawn
(A) Electricity (B) Sun
(C) Noon (D) Morning
(E) Heavy
38. ? : Man :: Aves : Bird
(A) Lizard (B) Homosapiens
(C) Mammals (D) Holothuroidea
(E) None of these
39. Newspaper : Press :: Cloth : ?
(A) Cotton (B) Mill
(C) Tailor (D) Market
(E) Textile
40. Fossils : Creatures :: Mummies : ?
(A) Mothers
(B) Human beings
(C) Dried up dead bodies
(D) Dead bodies
(E) Egypt
41. Education : Teacher :: Treatment : ?
(A) Medicine (B) Nurse
(C) Chemist (D) Clinic
(E) Doctor
42. Clock : Time :: Lamp : ?
(A) Bulb (B) Room
(C) Glow (D) Light
(E) Darkness
43. Well : Depth :: Word : ?
(A) Literature (B) Language
(C) Meaning (D) Writing
(E) Alphabet
44. House : Windows :: Man : ?
(A) Universe (B) Eyes
(C) Speech (D) Brain
(E) Emotion
45. Stammering : Speech :: Deafness : ?
(A) Hearing (B) Ear

- (C) Dumb (D) Silence
(E) Talk
46. Car : Petrol :: T.V. : ?
(A) Antenna (B) Entertainment
(C) Electricity (D) Screen
(E) Transmission
47. Home : Shelter :: School : ?
(A) Principal (B) Student
(C) Class (D) Teaching
(E) Education
48. Stone : Hard :: Feather : ?
(A) Soft (B) White
(C) Bird (D) Fly
(E) Wings
49. Tall : Short :: Treachery : ?
(A) Glory (B) Disgrace
(C) Honour (D) Loyalty
(E) Respect
50. Plant : Tree :: House : ?
(A) Skyscraper (B) Castle
(C) Home (D) Residence
(E) Building

Exercise 2

Directions—For each of the following questions there is some relationship between the two terms to the left of :: and the same relationship exists between the two terms to its right. In each of these questions the fourth term is missing. This term is one of the alternatives among the five terms given below. Find out this term.

1. ABC : ZYX :: CBA : ?
(A) XYZ (B) BCA
(C) YZX (D) ZXY
(E) XZY
2. JLN : SQO :: PRT : ?
(A) UYW (B) UTV

- (C) YWU (D) VUT
(E) TUV
3. ADE : FGJ :: KNO : ?
(A) PQR (B) TPR
(C) PQT (D) RQP
(E) PRS
4. DGJ : KMO :: MPS : ?
(A) TVX (B) WUS
(C) SVY (D) XVT
(E) XTV
5. ACE : HIL :: MOQ : ?
(A) TVX (B) TUX
(C) XVT (D) SUW
(E) WUS
6. LOM : NMK :: PKI : ?
(A) RIH (B) SHG
(C) RIG (D) RHG
(E) SIG
7. LJH : KKI :: CIA : ?
(A) BJB (B) BBB
(C) DBB (D) CBZ
(E) BBZ
8. Aab : aAB :: Pqr : ?
(A) PQR (B) PQr
(C) pQr (D) pQR
(E) PqR
9. BCD : FGH :: LMN : ?
(A) WXV (B) VWX
(C) STV (D) XWV
(E) TVW
10. ABD : CDF :: MNP : ?
(A) KLM (B) LNO
(C) VXY (D) NPQ
(E) EFH
11. UTS : FDC :: WVU : ?
(A) XWV (B) WXY
(C) SJM (D) RPO
(E) SRP
12. NUMBER : UNBMRE :: GHOST : ?
(A) HOGST (B) HOGTS
(C) HGOST (D) HGSOT
(E) HGOTS
13. DRIVEN : EIDRVN :: BEGUM : ?
(A) EUBGM (B) MGBEU
(C) BGMEU (D) UEBGM
(E) BGMUE
14. BDAC : FHEG :: NPMO : ?
(A) QTRS (B) RQTS
(C) TRQS (D) SQRT
(E) RTQS
15. PRLN : XZTV :: JLFH : ?
(A) RTNP (B) NPRT
(C) NRPT (D) NTRP
(E) RPNT
16. EGIK : FILO :: FHJL : ?
(A) JGMP (B) JGPM
(C) GJMP (D) GJPM
(E) GMJP
17. LXNU : NYPV :: QTBR : ?
(A) SDSU (B) RSUD
(C) RUSD (D) SRUD
(E) SUDS
18. PNLJ : IGEC :: VTRP : ?
(A) QOMK (B) RSTU
(C) QSRC (D) RPOM
(E) PRQM
19. JTIS : HRGQ :: FPEO : ?
(A) CNDM (B) CNDQ
(C) DNCM (D) DCNQ
(E) DMCN
20. QYGO : SAIQ :: UCKS : ?
(A) WDMV (B) VFNU
(C) WDLU (D) VEMU
(E) WEMU
21. YAWC : UESG :: QIOK : ?
(A) MINC (B) MIKE
(C) KOME (D) MMKO
(E) LIME
22. BZDX : FUHT :: JRLP : ?
(A) NNKL (B) NNLO
(C) NNPL (D) NMLR
(E) MNPT
23. ACFJ : OUZJ :: SUXB : ?
(A) GNSA (B) GLQZ
(C) GKPY (D) GORC
(E) GMTB
24. PCWL : REXM :: THNY : ?
(A) OZPL (B) KOVZ
(C) PMKZ (D) VJOZ
(E) UVXZ

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25. CFIL : PSVY :: HKNQ : ?
 (A) NPSV (B) LPSY
 (C) LORU (D) MOQT
 (E) MPSU

Exercise 3

Directions—For each of the following questions one term is missing which is shown by the question mark. The missing term is one from the five alternatives given below in such a way that the relation between the first two terms is the same as the relation between the last two terms. Find out the missing term.

1. $1/4 : 1/8 :: 1/3 : ?$
 (A) $1/7$ (B) $1/4$
 (C) $1/6$ (D) $2/6$
 (E) $1/2$
2. $1/4 : 1/8 :: 2/3 : ?$
 (A) $1/4$ (B) $1/3$
 (C) $1/2$ (D) $2/7$
 (E) $1/7$
3. $09 : 25 :: 49 : ?$
 (A) 63 (B) 36
 (C) 64 (D) 81
 (E) 100
4. $01 : 04 :: 05 : ?$
 (A) 06 (B) 16
 (C) 24 (D) 36
 (E) 25
5. $01 : 08 :: 09 : ?$
 (A) 16 (B) 25
 (C) 36 (D) 49
 (E) 64
6. $12 : 35 :: 16 : ?$
 (A) 32 (B) 48
 (C) 49 (D) 63
 (E) 45
7. $7 : 11 :: 31 : ?$
 (A) 36 (B) 39
 (C) 37 (D) 43
 (E) 45
8. $122 : 170 :: 290 : ?$
 (A) 299 (B) 315
 (C) 332 (D) 344
 (E) 362
9. $3 : 16 :: 7 : ?$
 (A) 49 (B) 52

- (C) 64 (D) 73
 (E) 81
10. $42 : 56 :: 110 : ?$
 (A) 132 (B) 136
 (C) 144 (D) 148
 (E) 156
11. $01 : 08 :: 16 : ?$
 (A) 25 (B) 125
 (C) 64 (D) 27
 (E) 81
12. $12 : 20 :: 30 : ?$
 (A) 15 (B) 32
 (C) 35 (D) 42
 (E) 48
13. $3 : 10 :: 08 : ?$
 (A) 10 (B) 13
 (C) 17 (D) 14
 (E) 16
14. $01 : 04 :: 08 : ?$
 (A) 96 (B) 81
 (C) 72 (D) 64
 (E) 49
15. $11 : 17 :: 19 : ?$
 (A) 29 (B) 27
 (C) 25 (D) 21
 (E) 23
16. $08 : 28 :: 15 : ?$
 (A) 63 (B) 126
 (C) 65 (D) 124
 (E) 26
17. $08 : 09 :: 64 : ?$
 (A) 16 (B) 25
 (C) 125 (D) 32
 (E) 20
18. $5 : 8 :: 15 : ?$
 (A) 19 (B) 20
 (C) 18 (D) 21
 (E) 17
19. $3 : 9 :: 8 : ?$
 (A) 14 (B) 64
 (C) 25 (D) 27
 (E) 20
20. $6 : 24 :: 5 : ?$
 (A) 23 (B) 22
 (C) 26 (D) 20
 (E) 19

21. 5 : 26 :: 7 : ?
 (A) 50 (B) 55
 (C) 28 (D) 19
 (E) 26
22. 6 : 35 :: 11 : ?
 (A) 120 (B) 115
 (C) 122 (D) 121
 (E) 124
23. 3 : 27 :: 4 : ?
 (A) 140 (B) 75
 (C) 100 (D) 80
 (E) 64
24. $3 : 3\frac{3}{8} :: 5 : ?$
 (A) $5\frac{5}{8}$ (B) $5\frac{3}{8}$
 (C) $5\frac{1}{8}$ (D) $2\frac{5}{8}$
 (E) $6\frac{5}{8}$
25. 1 : 5 :: 7 : ?
 (A) 8 (B) 9
 (C) 15 (D) 13
 (E) 11

Exercise 4

Directions—For each of the following questions, there are two words and five alternative answers. In each of the alternative answers there are two words. The candidate has to find out the alternative whose two words have the same relation as in the two words given in beginning.

1. Resignation : Office ::

- (A) Competition : Game
 (B) Illness : Hospital
 (C) Abdication : Throne
 (D) Moisture : Rain
 (E) Appointment : Interview

2. Bunch : Key ::

- (A) Hound : Pack
 (B) Team : Competition
 (C) Beehive : Bee
 (D) Examination : Subject
 (E) Bouquet : Flower

3. Profit : Loss ::

- (A) Success : Failure
 (B) Rupee : Paisa
 (C) Whole : Part
 (D) Multiplication : Addition
 (E) Adult : Child

4. Sapling : Tree ::

- (A) Horse : Mare
 (B) Student : Teacher
 (C) Bud : Flower
 (D) Tree : Furniture
 (E) River : Brook

5. Supervisor : Worker ::

- (A) Junior : Senior
 (B) Superior : Inferior
 (C) Elder : Younger
 (D) Debtor : Creditor
 (E) Officer : Clerk

6. Malaria : Mosquito ::

- (A) Poison : Death
 (B) Rat : Plague
 (C) Epidemic : Bacteria
 (D) Cholera : Water
 (E) Medicine : Disease

7. Paisa : Rupee ::

- (A) Kilogram : Quintal
 (B) Metre : Centimetre
 (C) Coin : Money
 (D) Weight : Ton
 (E) Rupee : Wealth

8. Poet : Verse ::

- (A) Prose : Novelist
 (B) Author : Book
 (C) Novel : Prose
 (D) Publication : Editor
 (E) Summary : Paraphrase

9. Water : Thirst ::

- (A) Food : Hunger
 (B) Sun : Energy
 (C) Appetite : Meal

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- (D) Ice-cream : Cold
(E) Poison : Death

10. Pulp : Paper ::
(A) Wood : Table
(B) Cloth : Shirt
(C) Yarn : Fabric
(D) Iron : Steel
(E) Wood : Sawdust

Directions—For each of the following questions, there are two words and eight alternative answers. The candidates have to find out two such alternatives the relation in which is the same as in the two words given in the beginning.

11. Trees and Forest
(A) Ocean (B) Page
(C) Books (D) Study
(E) Library (F) Ship
(G) Boys (H) Classes
12. Constable and Police
(A) Clerk (B) Hospital
(C) Medicine (D) Mother
(E) Girl (F) Doctor
(G) File (H) House
13. Brother-in-law and Sister
(A) I
(B) Youth
(C) Female-companion
(D) Wife
(E) My
(F) Beautiful Woman
(G) Damsel
(H) Sister-in-law
14. Cold and Hot
(A) January (B) Monday
(C) Year (D) June
(E) March (F) Thursday
(G) Month (H) August
15. High and Low
(A) Far (B) Rent
(C) Next (D) Near
(E) Distance (F) Fair
(G) Last (H) Clean
16. Unsuccess and Laziness
(A) Study (B) Success
(C) Day (D) School
(E) Labour (F) Lazy
(G) Game (H) Honesty

17. Car and Garage
(A) Horse (B) Grass
(C) Bird (D) Water
(E) Man (F) Stable
(G) Animal (H) Hive
18. Hand and Fingers
(A) Foot (B) Eyes
(C) Hat (D) Teeth
(E) Head (F) Stomach
(G) Nose (H) Hair
19. Oxygen and Man
(A) Petrol (B) Stool
(C) Carpenter (D) Sky
(E) Driver (F) Wood
(G) Water (H) Fish
20. Neat and Clean
(A) Dirty (B) Tidy
(C) Route (D) White
(E) Wise (F) Ravi
(G) Foul (H) Beauty

Directions—Q. 21–25. In each of the following two columns, the groups of three words are given. Compare two columns and find the pairs given below each question, which satisfy the same relationship between the two groups of that pair.

Column I

- (A) Cereal, Wheat, Tomato
(B) Seeds, Apple, Fruit
(C) Mother, Sister, Female
(D) Teacher, Writer, Speaker
(E) Stool, Furniture, Table

Column II

- (P) Apple, Banana, Fruit
(Q) Wheat, Barley, Cereals
(R) Doctor, Painter, Father
(S) Cow, Mammal, Animal
(T) Soldier, Army, Civilian

21. (A) BP (B) AQ
(C) CR (D) EP
22. (A) BR (B) AT
(C) CS (D) DP
23. (A) DR (B) BR
(C) ET (D) CS

24. (A) BS (B) AT
(C) AQ (D) DQ
25. (A) CR (B) EQ
(C) BQ (D) DS

Directions-26-30. In Column I are listed certain groups of individuals while in Column II are listed some of the characteristics against each group of individuals which are common to each member of that group.

| Column I | Column II |
|----------|-----------|
| FHIJ | TW |
| IJK | PT |
| IJLM | SUW |
| GHIKM | RV |
| GHI | QRV |
| FGI | PR |
| HIJ | QTW |
| IJL | QSUW |
| GIJ | PQS |

26. Which individual has all the above characteristics?
(A) J (B) I
(C) H (D) M
27. Which characteristics are found either in J or in K or in both but in M?
(A) P, Q, T (B) P, Q, R, S
(C) Q, R, S, T (D) U, V, T
28. Which characteristic is common to G and H but not in M?
(A) S (B) B
(C) Q (D) R
29. Which characteristics are common to H and J but not in K?
(A) P, Q (B) Q, W
(C) Q, R (D) R, W
30. Which characteristic is not found either in F or in L or in both?
(A) Q (B) U
(C) S (D) V

Exercise 5

Directions-For each of the questions from 1 to 10, there is a design at the left hand side and


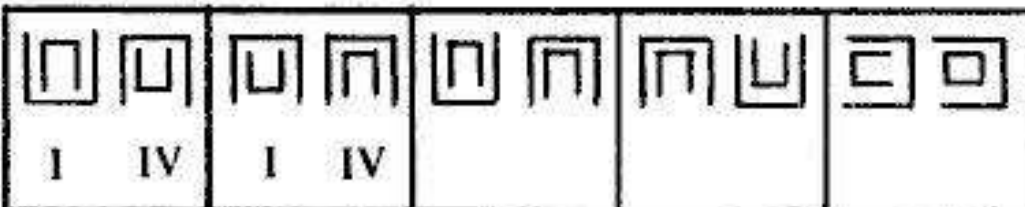
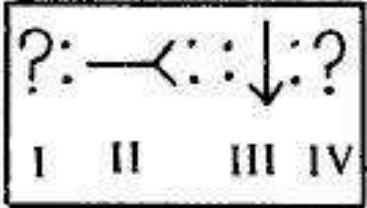
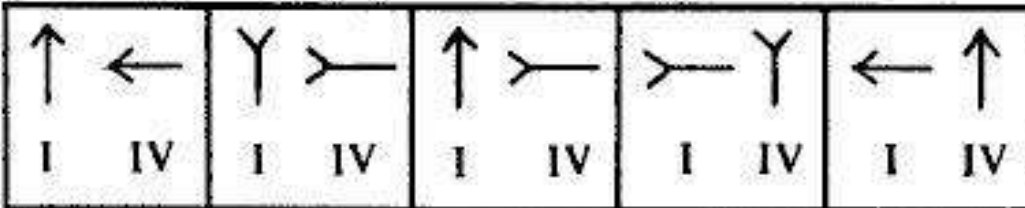
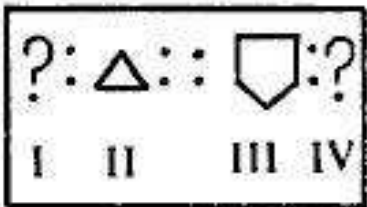
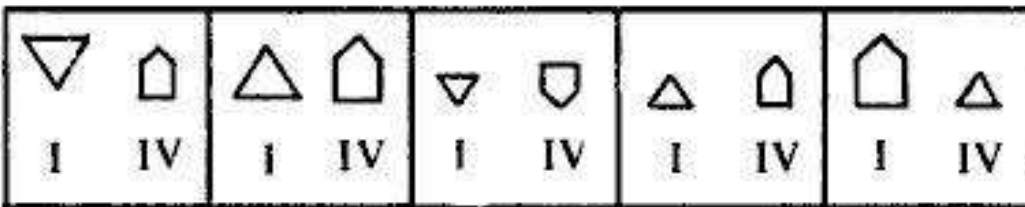
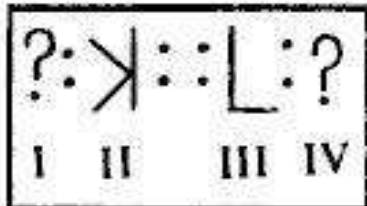

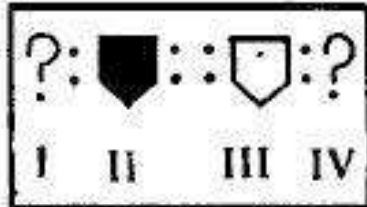
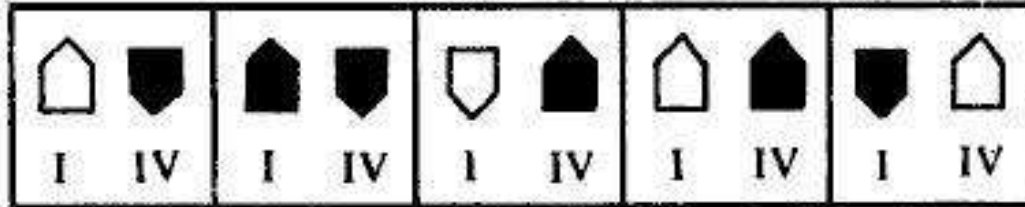
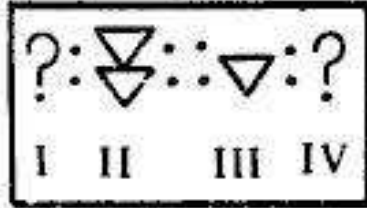
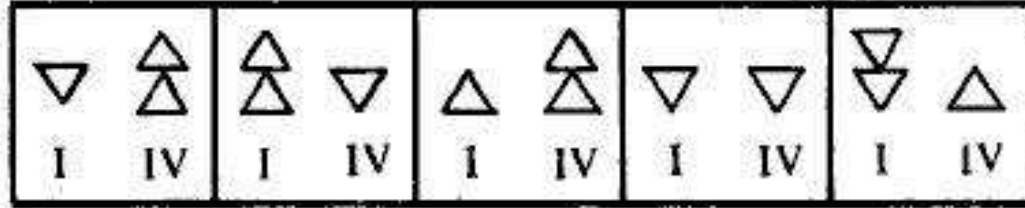
four designs at the right hand side. Find out the design from the right hand side, which resembles most to the design at hand side.

| L.H.S. | R.H.S. | | | |
|--------|--------|--|--|--|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |

Directions-In each of the questions from 11 to 16, the problem figure comprises four elements I, II, III and IV with question marks in places of elements I and IV. Each of the five answer figures has two elements I and IV. You have to select the answer figure so that the elements I and IV will substitute the question marks in I and IV in problem figure in such a manner that the element III will be related to IV in the same way as elements I will be related to II.

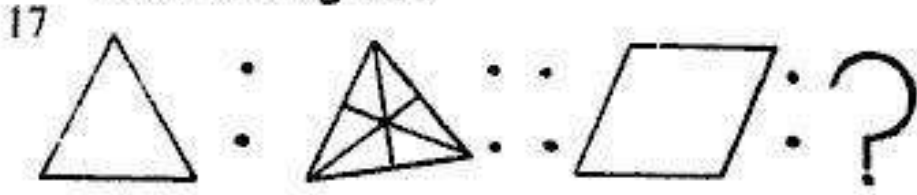
Problem Figures

Answer Figures

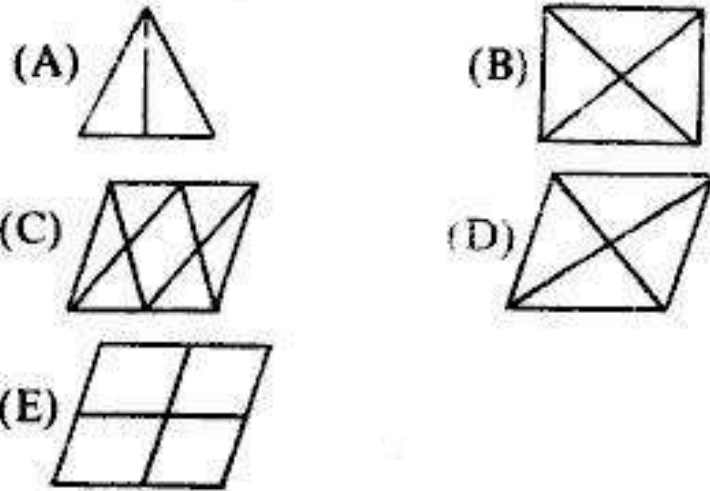
11.  
12.  
13.  
14.  
15.  
16.  

Directions—For each of the questions from 17 to 20, which one of the answer figures should be in place of question mark ?

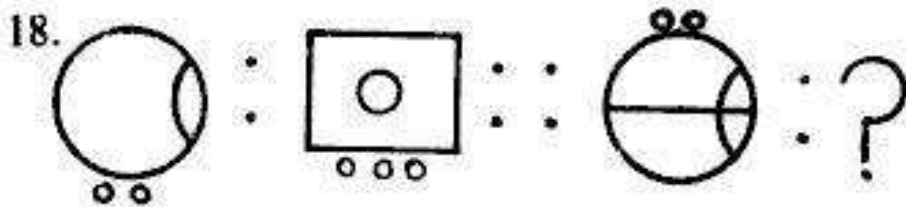
Problem Figures



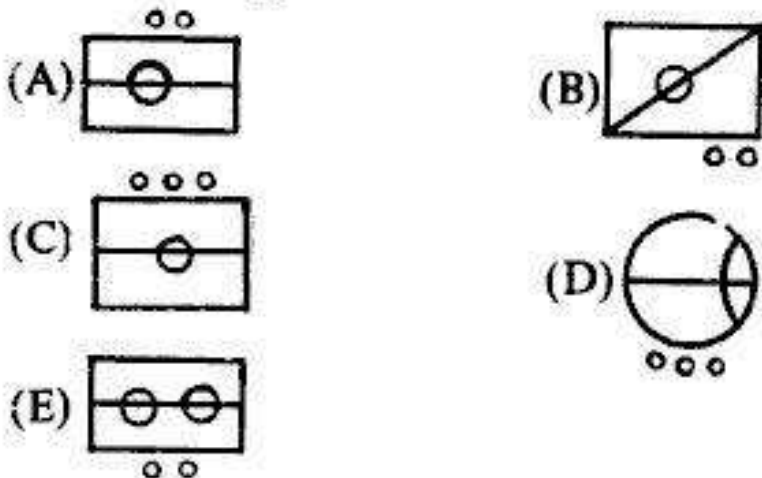
Answer Figures



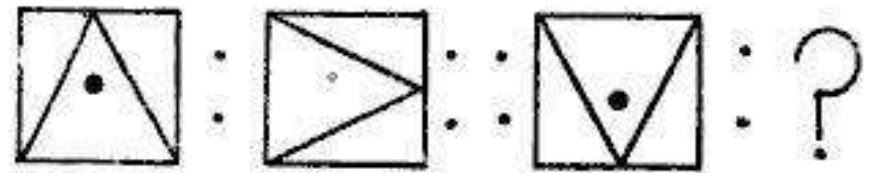
Problem Figures



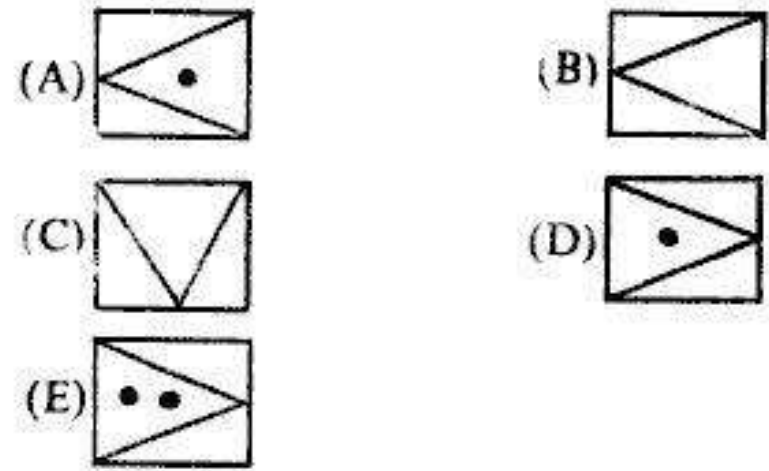
Answer Figures



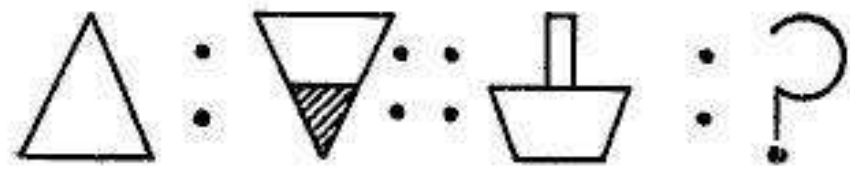
19. **Problem Figures**



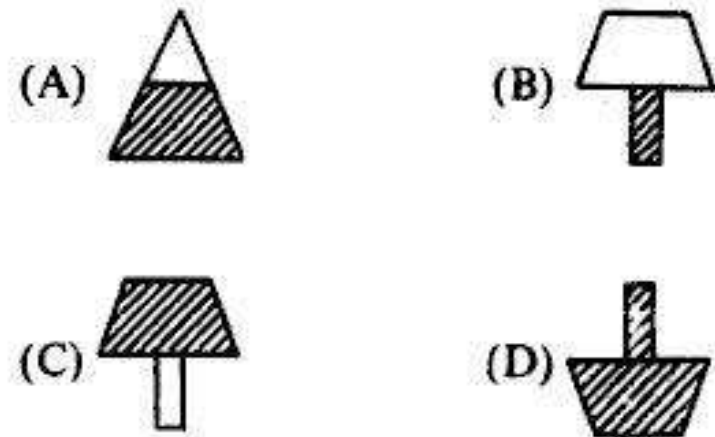
Answer Figures



20. **Problem Figures**

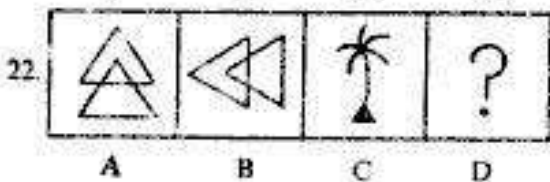
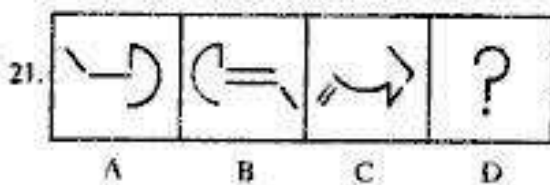


Answer Figures

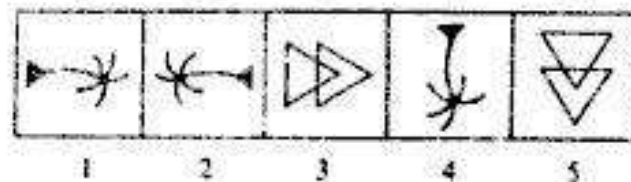
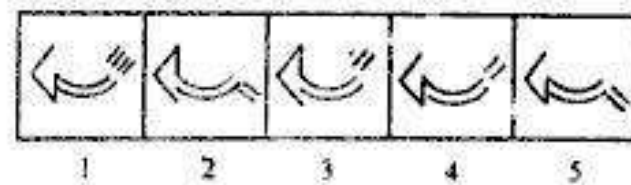


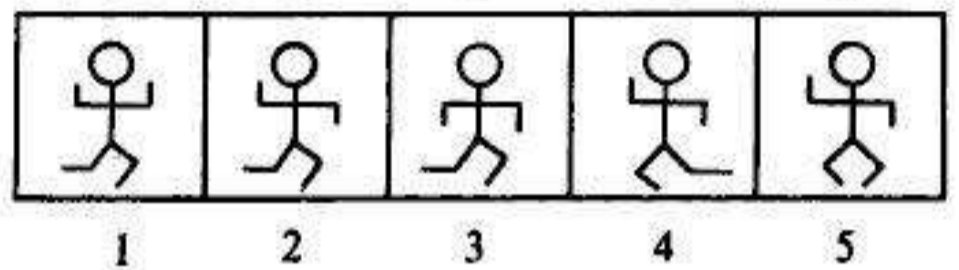
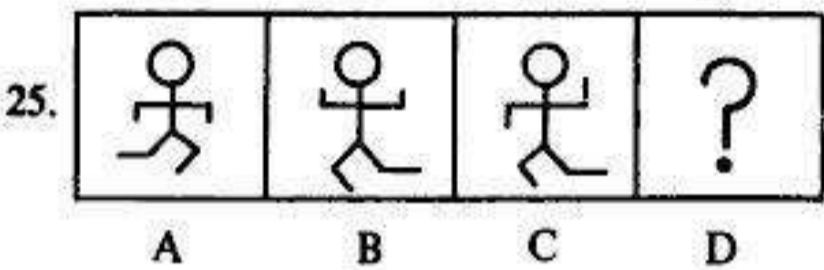
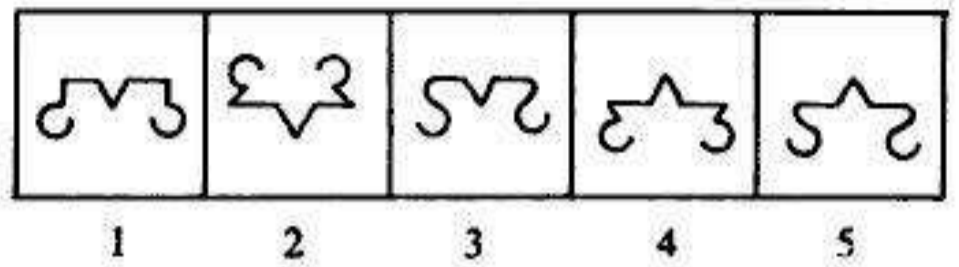
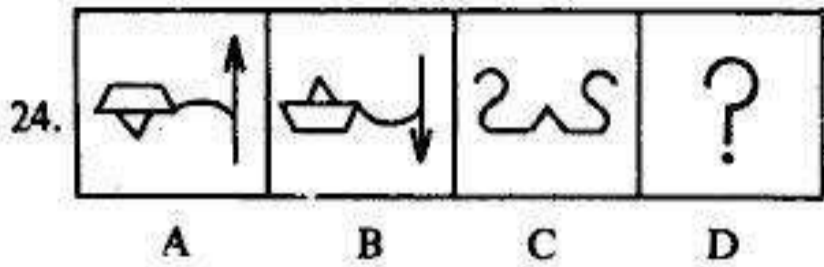
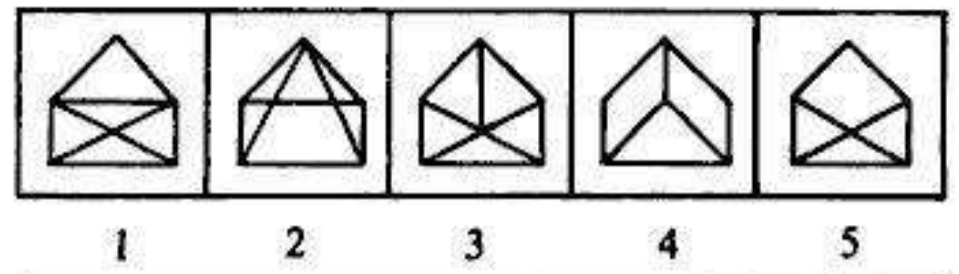
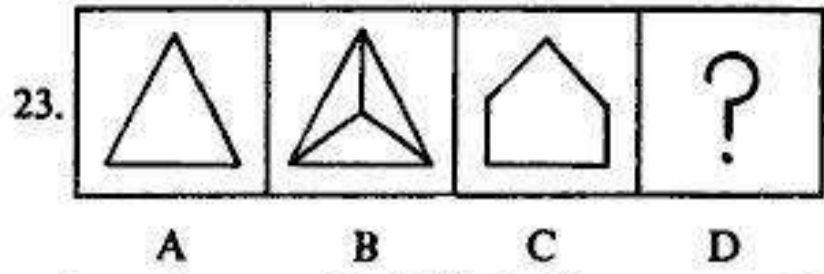
Directions—In the Problem Figures, there is a definite relationship between figures A and B. Establish the similar relationship between figures C and D by choosing a suitable figure from the set of answer figures.

Problem Figures



Answer Figures





Exercise 6

Directions—In each of the following question, three words are given with four alternatives. One of the four alternative is same as the three words given in beginning. The candidate has to find out the correct alternative answer.

- Which one is the same as Bombay, Calcutta, Cochin ?
(A) Delhi (B) Kanpur
(C) Madras (D) Sholapur
- Which one is the same as Coal, Ebony and Soot ?
(A) Blush (B) Raven
(C) Ash (D) Rust
- Which one is the same as Basket, Pail and Pan ?
(A) Knife (B) Spoon
(C) Fork (D) Bowl
- Which one is the same as Emancipate, Free and Release ?
(A) Ignore (B) Pardon
(C) Liberate (D) Quit
- Which one is the same as Daisy, Pansy and Rose ?
(A) Bed (B) Violet
(C) Plant (D) Red

Directions—Find out the correct answer in each of the questions from 6 to 10.

- Which one is the same as Arid, Parched and Droughty ?
(A) Draft (B) Cow
(C) Earth (D) Dry
- Which one is the same as Grandfather, Father and Brother ?
(A) Baby (B) Father-in-law
(C) Son (D) Son-in-law
- Which one is the same as Yellow, Orange and Green ?
(A) Tree (B) Purple
(C) Grass (D) Leaf
- Which one is the same as Lungs, Liver and Kidneys ?
(A) Heart (B) Intestines
(C) Testis (D) Neck
- Which one is the same as Lock, Shut and Fasten ?
(A) Window (B) Door
(C) Block (D) Iron

Directions—Q. 11–15: In each of the following questions, three words are given. Under them four alternatives are provided, one of which expresses most effectively the general characteristic of these three words. That alternative is your answer.

- Aeroplane, Train, Truck
(A) Speed (B) Rooms
(C) Wheels (D) Transport

12. Wolf, Leopard, Deer
(A) Meat eater (B) Jungles
(C) Mammals (D) Cruel
13. Sword, Gun, Pistol
(A) Arms (B) Constable
(C) Bullet (D) War
14. Fraud, Jealousy, Hatred
(A) Destruction (B) Envy
(C) Human characteristics (D) Quality
15. Novel, Epic, Drama
(A) Subject (B) Literature
(C) Poetry (D) Knowledge
- Directions**—Q. 16–30: In each of the following questions, three words are given. They are followed by four words, one of which stands for the class to which these three words belong. Identify that word.
16. Wheat, Barley, Rice
(A) Food (B) Gram
(C) Cereal (D) Agriculture
17. Coal, Iron, Mica
(A) Rock (B) Minerals
(C) Gold (D) Earth
18. Honesty, Credibility, Reliability
(A) Quality (B) Dependability
(C) Charter (D) Nicety
19. Cap, Coat, Trousers
(A) Smart (B) Shirt
(C) Dress (D) Tailor
20. Stool, Table, Chair
(A) Bench (B) Furniture
(C) Carpet (D) Office

Directions—Each of the following questions has four alternative responses. Select the correct response.

21. Which one of the following is same as liver, heart, kidney?
(A) Nose (B) Blood
(C) Urine (D) Lung
22. Which one of the following is same as uncle, aunt, brother?
(A) Child (B) Boy
(C) Adult (D) Nephew
23. Which one of the following is same as Jute, Cotton, Wool?
(A) Nylon (B) Rayon
(C) Silk (D) Terylene
24. Which one of the following is same as lead, convince, allure?
(A) Direct (B) Order
(C) Initiate (D) Fascinate
25. Which one of the following is same as flood, fire, cyclone?
(A) Accident (B) Rain
(C) Earthquake (D) Damage
26. Which one of the following is same as carpenter, plumber, electrician?
(A) Doctor (B) Blacksmith
(C) Teacher (D) Lawyer
27. Which one of the following is same as cork, plug, dam?
(A) Obstruction (B) Drain
(C) Pipe (D) Tap
28. Which one of the following is same as red, yellow, blue?
(A) Sky (B) Dark
(C) Green (D) Bright
29. Which one of the following is same as desire, wish, want?
(A) Pleasant (B) Feel
(C) Anxiety (D) Satisfy
30. Which one of the following is same as ohm, volt, amp.?
(A) Light (B) Metre
(C) Hour (D) Watt

Exercise 7

1. 'Skirmish' is related to 'War' in the same way as 'Disease' is related to—
(A) Infection (B) Epidemic
(C) Patient (D) Medicine
(E) Death
2. 'Captain' is related to 'Soldier' in the same way as 'Leader' is related to—
(A) Chair (B) Follower
(C) Party (D) Minister
(E) Vote

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3. 'Tree' is related to 'Root' in the same way as 'Smoke' is related to-
- (A) Cigarette (B) Fire
(C) Heat (D) Chimney
(E) Wood
4. 'Head' is related to 'Cap' in the same way as Finger is related to-
- (A) Nail (B) Helmet
(C) Ring (D) Thimble
(E) Thumb
5. 'Carpenter' is related to 'Furniture' in the same way as 'Cobbler' is related to-
- (A) Shoe (B) Chappal
(C) Footwear (D) Leather
(E) Chair
6. 'Tree' is related to 'Sapling' in the same way as 'Woman' is related to-
- (A) Off-spring (B) Father
(C) Boy (D) Flower
(E) Girl
7. 'Vocalist' is related to 'Song' in the same way as 'Player' is related to-
- (A) Game (B) Victory
(C) Match (D) Practice
(E) Team
8. 'Accommodation' is related to 'Rent' in the same way as 'Journey' is related to-
- (A) Luggage (B) Expense
(C) Tax (D) Octroi
(E) Fare
9. 'Smoke' is related to 'Pollution' in the same way as 'War' is related to-
- (A) Victory (B) Death
(C) Destruction (D) Treaty
10. 'Bell' is related to 'Sound' in the same way as 'Lamp' is related to-
- (A) Flame (B) Light
(C) Wick (D) Oil
(E) Gong
11. 'Stone' is related to 'Hard' in the same way as 'Feather' is related to-
- (A) White (B) Bird
(C) Soft (D) Fly
(E) Wings
12. 'Thermometer' is related to 'Degree' in the same way as 'Clock' is related to-
- (A) Wall (B) Time
(C) Hour (D) Needle
(E) Pendulum.
13. 'Soft' is related to 'Sponge' in the same way as 'Sharp' is related to-
- (A) Blunt (B) Pierce
(C) Cut (D) Edge
(E) Knife
14. 'Cardboard' is related to 'Opaque' in the same way as 'Glass' is related to-
- (A) Brittle (B) Lustrous
(C) Glossy (D) Transparent
(E) Hard
15. 'House' is related to 'Wall' in the same way as 'Wall' is related to-
- (A) Cement (B) Brick
(C) Sand (D) Roof
(E) Paint
16. 'Walk' is related to 'Run' in the same way as 'Breeze' is related to-
- (A) Wind (B) Cold
(C) Air (D) Fast
(E) Breathe
17. 'Factory' is related to 'Production' in the same way as 'School' is related to-
- (A) Teachers (B) Building
(C) Education (D) Students
(E) Discipline
18. 'Stammering' is related to 'Speech' in the same way as 'Deafness' is related to which of the following ?
- (A) Ear (B) Hearing

- (C) Dumb (D) Silence
(E) Talk
19. 'Pupil' is related to 'Class' in the same way as 'Bead' is related to—
(A) Necklace
(B) Ornament
(C) Jewellery
(D) Gold
(E) Ring
20. 'Book' is related to 'Author' in the same way as 'Food' is related to—
(A) Guest
(B) Container
(C) Cook
(D) Butter
(E) Housewife
21. 'What' is related to 'Foot' in the same way as a 'Hand' is related to Wrist ?
(A) Length (B) Shoe
(C) Ankle (D) Leg
22. 'What' is related to 'Pint' in the same way as 'Inch' is related to Centimetre ?
(A) Gallon (B) Litre
(C) Weight (D) Volume
23. As 'friend' is to 'friendly' so 'opponent' is to—
(A) Enemy (B) Hostile
(C) Defeat (D) Contest

Exercise 8

Directions—In each of the sentences given below, there are two question marks given one in the beginning and the other at the end. To fill up the question marks, there are few alternatives. Choose the correct alternative.

1. ? is related to Masculine in the same way Woman is related to ?
(A) Disguise, Modest
(B) Capacity, Woman
(C) Man, Feminine
(D) Brave, Mrs.

2. ? is to Sky as Fish is to ?
(A) Blue, Swim (B) Bird, Water
(C) Open, Hook (D) Tree, Colour
3. ? is to Uncle as Mother is to ?
(A) Brother, Brought-up
(B) Father, Aunt
(C) Cousin, Beautiful
(D) Aunt, Father
4. ? is to Sri Lanka as Delhi is to ?
(A) Columbo, India
(B) Kathmandu, Capital
(C) India, Paris
(D) Island, Harbour
5. ? is to Ivory as Deer is to ?
(A) White, Hunt
(B) Elephant, Horn
(C) Huge, Rare
(D) Costly, Scarce

Directions—From questions 6 to 10 fill the correct pair in place of question marks.

6. Table is to ? as Cup is to ?
(A) Furniture, Tea (B) Student, Horse
(C) Wood, Hot (D) Chair, Plate
7. Sugar is to ? as Mava is to ?
(A) Sweet, Sour
(B) Energy, Machine
(C) Sugarcane, Milk
(D) White, Sweet
8. ? is to Sun as Rain is to ?
(A) Moon, Rainbow
(B) Light, Cloud
(C) Sky, Wet
(D) Day, Night
9. ? is to Brain as Mouth is to ?
(A) Skull, Tongue (B) Hat, Lips
(C) Hair, Voice (D) Turban, Saliva
10. ? is to Touch as Ear is to ?
(A) Hand, Know
(B) Experience, Feeling
(C) Skin, Hear
(D) Hair, Dirt

Answers

Exercise 1

1. (C) Since 'Atmosphere' is the biggest unit which contains 'Air' in the same way 'Ocean' is the biggest unit which contains 'Water'.
2. (A) As 'Father' is the masculine of 'Mother' in the same way 'Son' is the masculine of 'Daughter'.
3. (B) As 'Defy' is the opposite of 'Obey' in the same way 'Rest' is the opposite of 'Work'.
4. (C) As 'Sun' the source of 'Light' in the same way 'Fire' is the source of 'Heat'.
5. (B) As 'Oil' is used in 'Lamp' in the same way 'Wax' is used in 'Candle'.
6. (D) As 'Parrot' is captured in 'Cage' similarly 'Man' is captured in 'Prison'.
7. (C) As 'Ink' is used in 'Pen' similarly 'Lead' is used in 'Pencil'.
8. (B) As 'Safety' is the opposite of 'Trouble', similarly 'Slavery' is the opposite of 'Freedom'.
9. (D) As 'Health' is the opposite of 'Sickness' in the same way 'Sorrow' is the opposite of 'Happiness'.
10. (C) As 'Bee' gives 'Honey' as liquid material, in the same way 'Cow' gives 'Milk' as liquid material.
11. (B) As 'Pond' is the small form of 'Ocean' in the same way 'Shallow' is the small form of 'Deep'.
12. (D) As 'Abstract' is the opposite of 'Concrete' in the same way 'Complex' is the opposite of 'Simple'.
13. (C) As 'Run' is the high speed of 'Walk' in the same way 'Wind' is the high speed of 'Breeze'.
14. (E) As 'Production' is obtained from 'Factory' in the same way 'Education' is obtained from 'School'.
15. (D) As 'House' is made with 'Walls' in the same way 'Wall' is made with 'Bricks'.
16. (C) As 'Cardboard' is 'Opaque' so 'Glass' is 'Transparent'.
17. (E) As 'Sponge' is 'Soft' so 'Knife' is 'Sharp'.
18. (A) As 'Class' is formed with a number of 'Pupils' so 'Necklace' is formed with a number of 'Beads'.
19. (E) As 'Entrance' is the opposite of 'Exit' so 'Loyalty' is the opposite of 'Treachery'.
20. (E) As a 'Book' contains many 'Chapters' so 'Bouquet' contains many 'Flowers'.
21. (D) As 'Disease' is studied under 'Pathology' so 'Planets' are studied under 'Astronomy'.
22. (A) As 'Ankle' is the lower part of 'Knee' so 'Wrist' is the lower part of 'Elbow'.
23. (E) As 'Army' contains a number of 'Soldiers' so 'Galaxy' contains a number of 'Stars'.
24. (D) As 'Medicine' is prescribed by 'Doctor' so 'Lecture' is delivered by 'Teacher'.
25. (C) As 'Statue' depends upon 'Size' so 'Song' depends upon 'Tune'.
26. (D) As 'Sorrow' is the opposite of 'Joy' so 'Pleasure' is the opposite of 'Pain'.
27. (A) As 'Dark' is the opposite of 'Light' so 'Black' is the opposite of 'White'.
28. (C) As 'Litre' is a measuring unit of 'Volume' so 'Metre' is a measuring unit of 'Length'.
29. (B) As 'Sphere' and 'Cube' are solid figures so 'Circle' and 'Square' are plane figures.
30. (D) As 'Ornithologist' is a specialist in the science of 'Birds' so 'Anthropologist' is a specialist in the science of 'Mankind'.
31. (C) As 'Staircase' has many steps so 'Army' has a number of 'Soldiers'.
32. (A) As 'Ancient' is the opposite of 'Modern' in the same way 'Often' is the opposite of 'Seldom'.
33. (D) As 'Snake' attacks by 'Fang' similarly 'Bee' attacks by 'Sting'.
34. (B) 'Vulgarity' is the opposite of 'Elegance' similarly 'Awkward' is the opposite of 'Graceful'.

35. (D) First word is the opposite of second word.
 36. (C) As 'Kangaroo' is found in Australia, similarly 'Giraffe' is found in 'Africa'.
 37. (E) First word is the opposite of the second word.
 38. (B) First word is species of the second word.
 39. (B) As 'Newspaper' is printed in 'Press', similarly 'Cloth' is made in 'Mill'.
 40. (B) As 'Fossils' are the remains of 'Creatures' dug up from earth in the same way 'Mummies' are the remains of the 'Human-beings'.
 41. (E) As 'Education' is obtained from 'Teacher', in the same way 'Treatment' is obtained from 'Doctor'.
 42. (D) As 'Time' is known by 'Clock' similarly 'Light' is obtained from 'Lamp'.
 43. (C) Importance of 'Well' is from 'Depth' similarly importance of 'Word' is from its 'Meaning'.
 44. (B) As 'Windows' are an outer part of 'House' in the same way 'Eyes' are the outer part of 'Man'.
 45. (A) As 'Stammering' is the defect of 'Speech' similarly 'Deafness' is the defect of 'Hearing'.
 46. (C) As 'Car' works with petrol similarly T.V. works with 'Electricity'.
 47. (E) As 'Home' provides 'Shelter', in the same manner 'School' provides 'Education'.
 48. (A) Second word is the characteristic of the first.
 49. (D) First word is the opposite of the second word.
 50. (E) As 'Tree' is a bigger form of 'Plant' similarly 'Building' is the bigger form of 'House'.
3. (C) In first term, two letters are missing between first two letters while last two are continuous but in second term first two letters are continuous and two letters are missing between last two letters.
 4. (A) In first term two letters are missing between each of the two letters while one letter is missing between each of the two letters.
 5. (B) There is a gap of one letter between each two consecutive letters of ACE and MOQ but the first two letters of HIL are in sequence while one letter is missing between the second and third letters.
 6. (C) One letter is missing between first letters of first and second term. The same is the case between second letters and third letters of the two terms.
 7. (A) In the two terms first letters are in reverse alphabetical order whereas second letters and third letters are in alphabetical order.
 8. (D) Capital letter in the first term is the small letter in the second term and small letters in the first term are capital letters in the second term.
 9. (B) Letters in each group are in alphabetical order.
 10. (E) First and second letters of each group are in alphabetical order while there is a gap of one letter between the second and third letters.
 11. (D) The letters of each group are in reverse order.
 12. (D) First two letters of the first term are in reverse order in the second term and so are the next two letters.
 13. (D) Fifth and third letters of the first term are first and second letters of the second term and first two letters of the first term are third and fourth letters of the second term.
 14. (E) In each term third, first, fourth and second letters are in alphabetical order.
 15. (A) There is a gap of one letter between third and fourth, fourth and first, and first and second letters of each group.

Exercise 2

1. (A) CBA is the reverse of ABC, so ZYX is the reverse of XYZ.
2. (C) In first term one letter is missing between two consecutive letters in alphabetical order while in second term same is repeated but in reverse order.

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16. (C) One letter is missing between each two letters in first term while two letters are missing in second term. Again in third term one letter is missing. So in fourth term two letters would be missing.
17. (E) There is one letter missing between the first and third letters of the two terms while second and fourth letters are in the sequence.
18. (A) There is one letter missing between two successive letters in each term in reverse order of alphabet.
19. (C) There is a gap of one letter between each corresponding letters of 'JTIS' and 'HRGQ'.
20. (E) There is a gap of one letter between each corresponding letters of 'QYGO' and 'SAIQ'.
21. (D) There is a gap of three letters between each corresponding letters of YAWC and UESG.
22. (C) There is a gap of three letters between each corresponding letters of 'BZDX' and 'FUHT'.
23. (E) There is a gap of 13, 17, 23 and Zero letters between first letters, second letters, third letters and fourth letters respectively of the words 'ACFJ' and 'OUBJ'.
24. (D) There is a gap of one letter between the first letters of PCWL and REXM and also a gap of one letter between the second letters but third letters and fourth letters are in sequence.
25. (C) There is a gap of two letters between the two consecutive letters of each term.

Exercise 3

1. (C) First term is double of the second term.
Hence fourth term will be

$$= \frac{1}{3} \times \frac{1}{2} \text{ i.e. } \frac{1}{6}$$
2. (B) First term is double of the second term.
Hence fourth term

$$= \frac{1}{2} \times \frac{2}{3} = \frac{1}{3}$$
3. (D) First term is the square of 3, second term is the square of 5 and the third term is the square of 7. Hence the fourth term will be the square of 9.
4. (D) Second term = (First term + 1)².
∴ Fourth term = (Third term + 1)².
5. (E) First term = (1)².
Second term = (2)³
Third term = (3)²
∴ Fourth term = (4)³
6. (D) First term = 6 × 2.
Second term = 6² - 1
Third term = 8 × 2
∴ Fourth term = 8² - 1
7. (C) First term is a prime number. Second term is the next prime number to it. Hence fourth term should be next prime number to 31.
8. (E) First, second, and third each term is one more than the square of prime number.
Hence the fourth term = (19)²+1.
9. (C) First term = (2)²-1.
Second term = (4)²
Third term = (2)³-1
(B) ∴ Fourth term = (4)³
10. (A) First term = (6)² + 6.
Second term = (7)² + 7
Third term = (10)² + 10
∴ Fourth term = (11)² + 11
11. (B) First term = (1)²; Second term = (2)³
Third term = (4)². Hence fourth term = (5)³
12. (D) First term = 3² + 3.
Second term = 4² + 4
Third term = 5² + 5
∴ Fourth term = 6² + 6
13. (C) First term = 2²-1.
Second term = 3² + 1
Third term = 3²-1
∴ Fourth term = 4² + 1
14. (B) Second term = (First term + 1)²
∴ Fourth term = (Third term + 1)²
15. (A) All the terms are alternate prime numbers.

16. (C) First term = $3^2 - 1$
 Second term = $3^3 + 1$
 Third term = $4^2 - 1$
 \therefore Fourth term = $4^3 + 1$
17. (B) First term = 2^3
 Second term = 3^2
 Third term = 4^3
 \therefore Fourth term = 5^2
18. (C) Second term = First term + 3
 \therefore Fourth term = Third term + 3
19. (B) Second term = (First term)²
 \therefore Fourth term = (Third term)²
20. (D) Second term = $4 \times$ First term
 \therefore Fourth term = $4 \times$ Third term
21. (A) Second term = (First term)² + 1
 \therefore Fourth term = (Third term)² + 1
22. (A) Second term = (First term)² - 1
 \therefore Fourth term = (Third term)² - 1
23. (E) Second term = (First term)³
 \therefore Fourth term = (Third term)³
24. (A) Second term = First term +
 $\frac{1}{8}$ First term
 \therefore Fourth term = Third term +
 $\frac{1}{8}$ Third term
25. (E) Second term = (First term) + 4
 \therefore Fourth term = (Third term) + 4
6. (D) As malaria is caused by the mosquito in the same way cholera is caused due to water.
7. (A) As 100 paise are equivalent to a rupee in the same way 100 kilograms are equivalent to a quintal.
8. (B) As verse is written by a poet in the same way book is written by an author.
9. (A) As 'Water' quenches 'Thirst' in the same manner 'Food' satisfies 'Hunger'.
10. (C) As 'Pulp' is the raw material for 'Paper', in the same manner 'Yarn' is the raw material for 'Fabric'.
11. (C, E) As number of trees together make 'Forest' in the same manner number of books together make 'Library'.
12. (F, B) As 'Constable' comes under the 'police' department, in the same way 'doctor' comes under the 'hospital'.
13. (B, G) Second word is the feminine of the first.
14. (A, D) As the month of January is cold, the month of June is hot.
15. (A, D) One word is the antonym of the other.
16. (B, E) First word is the result of the second.
17. (A, F) Second word is the place where the first is kept.
18. (E, H) One is the part of the other.
19. (G, H) As 'man' cannot live without oxygen in the same way 'fish' cannot live without water.
20. (A, G) The given words are synonym to each other.
21. (D) In (E) furniture and its two examples are given. In the same way in (P) fruit and its examples are given.
22. (C) In (C) mother is a sister and a female in the same way in (S). Cow is a mammal and an animal.
23. (A) A teacher can be a writer and a speaker. In the same way a doctor can be a painter as well as a father.
24. (B) In (A) wheat comes under 'cereal' while tomato does not come under cereal. In the same way soldier comes under the army while civilian does not.

Exercise 4

1. (C) As in resignation the office is to be left in the same manner when abdication is done, throne is to be left.
2. (E) As 'Bunch' is the collection of 'Keys', in the same way 'Boquet' is the collection of 'Flowers'.
3. (A) As profit is antonym of loss, in the same way success is the antonym of failure.
4. (C) As sapling is a young tree in the same way bud is the young flower.
5. (E) As supervisor supervises the worker in the same way officer supervises the clerk.

25. (B) In (E) Stool and table both come under the furniture. In the same way wheat and barley both come under cereal.
26. (B) I has all the eight characteristics which are P, Q, R, S, T, U, V and W.
27. (A) J has characteristics T, W, P, S, U and Q
K has characteristics P, T, R and V
M has characteristics S, U, W, R and V.
Hence only T, P, and Q are only the required characteristics.
28. (C) 29. (B) 30. (D)

Exercise 5

- (C) Only in figure (C), the line has one arrow at the one end and two arrows in the middle.
- (C) In all the rest figures the central circular part is touching the side part.
- (C) There are rectangles in all the rest figures.
- (C) Only in figure (C) one eye is black and the other is white.
- (D) Only in figure (D) the bottom line is black and there are two more lines.
- (C) Only in figure (C) an arc below the eyes is concave toward the eyes.
- (C) Only in figure (C) the curve takes three rounds.
- (A) In figure (B) one end of the letter S is joint to the central part. In figure (C) there is an arrow at one end and in figure (D) both ends are joined to the central part.
- (B) If the given figure is rotated through 180° figure (B) is obtained.
- (A) If the given figure is rotated through 90° in clockwise direction figure (B) is obtained.
- (A) From figure I to II the direction of outer 'U' is reversed while the inner U remains as it is.
- (C) From figure I to II the arrow is replaced by a line with two dashes at the ends and with the rotation at 45° in clockwise direction.
- (A) The triangle in figure I is reduced and rotated by 180° in figure II.
- (D) 'K' in figure I is rotated by 180° in figure II.
- (D) Pentagon in figure I is rotated by 180° and becomes black from white in figure II.
- (C) Triangle in figure I is rotated by 180° and doubles in number in figure (2).
- (C) Figure (C) is obtained by joining the middle points of the sides of the triangle to the opposite vertices. If the middle points of the sides are joined to the opposite vertices in figure (B). We will get the required answer.
- (C) If in figure (1) circle is changed into a square, arc is removed and a circle is middle in the centre and one small circle is increased out of the figure, figure (2) is obtained. If these changes are made in figure (3), the required figure is obtained.
- (B) Figure (2) is obtained by rotating the figure (1) clockwise through 90° and removing the dot which is inside the triangle.
- (B) If figure (1) is turned upside down and its lower power is shaded, figure (2) is obtained.
- (4) If figure (1) is rotated through 180° turning the dash upside down and increasing one line, figure (2) is obtained.
- (2) If figure (1) is rotated anticlockwise through 90° , the figure (2) is obtained.
- (4) If in figure (1) all the vertices are joined to a point inside the figure, we get figure (2).
- (3) If figure (1) is turned upside down figure (2) is obtained.
- (2) The figure (2) is obtained by changing the direction of hands and legs in figure (1).

Exercise 6

- (C) All are harbours.
- (C) All are the forms of carbon.
- (D) Basket, Pail, Pan and Bowl—all are vessels.
- (C) The synonym of Emancipate, free and release is liberate.
- (C) Daisy, Pansy, Rose and Violet are flowers or plants.
- (D) The synonym of arid, parched and droughty is dry.
- (C) The word 'son' makes a lineage with grandfather, father and brother.
- (B) As yellow, orange and green are different colours so purple is also a colour.

Exercise 7

9. (A) As lungs, liver and kidneys are internal organs of body, in the same way 'heart' is also an internal organ.
 10. (C) The synonym of lock, shut and fasten is block.
 11. (D) Aeroplane, Train and Truck are all the means of transport.
 12. (C) All the three given animals are mammals.
 13. (A) All the three given words are arms.
 14. (C) All the three given words are the characteristics of human beings.
 15. (B) All the given words are different forms of literature.
 16. (C) All the three given things are cereals.
 17. (B) Coal, iron and mica are all minerals.
 18. (A) All the three given words are the qualities of a person.
 19. (C) All the three given words are the parts of dress.
 20. (B) All the three given words are the parts of furniture.
 21. (D) Lung is also an internal part of body as liver, heart and kidney are the internal parts of body.
 22. (D) Like uncle, aunt and brother, the term nephew is also used to show relationship.
 23. (C) Jute, cotton, wool and silk all are natural yarns.
 24. (D) The synonym of lead, convince and allure is fascinate.
 25. (C) Like flood, fire, cyclone, earthquake is also a natural calamity.
 26. (B) Carpenter, plumber, electrician and blacksmith are all manual workers.
 27. (A) Obstruction is caused due to cork, plug and dam.
 28. (C) As red, yellow and blue are the different colours in the same way green is also a colour.
 29. (C) The synonym of desire, wish and want is anxiety.
 30. (D) Ohm, volt, ampere and watt are units of measurement of electricity.
1. (B) As skirmish leads to war in the same way disease leads to epidemic.
 2. (B) As soldier follows the captain in the same way follower follows the leader.
 3. (B) As a tree grows with root, in the same way smoke is produced with fire.
 4. (D) As cap is worn on the head in the same way ring is worn on the finger.
 5. (C) As furniture is made by carpenter in the same way footwear is made by cobbler.
 6. (E) As sapling is a younger form of a tree in the same manner girl is the younger form of a woman.
 7. (A) As to sing is the hobby of a vocalist in the same manner to play a game is the hobby of a player.
 8. (E) As money given for accommodation is known as rent in the same manner money given for journey is known as fare.
 9. (C) As smoke leads to pollution in the same way war leads to destruction.
 10. (B) As bell gives sound in the same way lamp gives light.
 11. (C) As to be hard is the quality of the stone in the same manner to be soft is the quality of the feather.
 12. (C) As unit of thermometer is 'degree' in the same way unit of clock is 'hour'.
 13. (E) As 'softness' is found in sponge in the same way 'sharpness' is found in knife.
 14. (D) As to be 'Opaque' is the quality of the cardboard in the same way to be transparent is the quality of glass.
 15. (B) As wall is a part of a house in the same way brick is a part of wall.
 16. (A) 17. (C) 18. (B) 19. (A) 20. (C)
 21. (C) 22. (A) 23. (B)

Exercise 8

1. (C) 2. (B) 3. (D) 4. (A) 5. (B)
6. (D) 7. (C) 8. (B) 9. (A) 10. (C)

Spotting Out the Dissimilar

In this type of test, five words are given out of which four are almost same in nature but the rest one is different from the four. The candidate has to find out which one word is different from the rest.

For classification two illustrations are given below.

Example 1. Which one of the words given below is different from the rest ?

- (A) Mango (B) Apple
(C) Brinjal (D) Grapes
(E) Pomegranate

Answer with Explanation - (C). Except 'Brinjal' all the rest are the names of fruits, while 'Brinjal' is name of a vegetable. Hence 'Brinjal' is different from the rest.

Example 2. Find out the pair which is different from the other given pairs.

- (A) Cow and Buffalo
(B) Cock and Hen
(C) Horse and Mare
(D) Dog and Bitch
(E) Peacock and Peahen

Answer with Explanation-(A). Except the first pair, in all pairs the second word is the feminine of the first word.

Example 3. In the following five groups of letters, one group is different from the other four groups. Find out the group which is different from the rest.

- (A) E D C B A (B) X W V U Y
(C) J I H G F (D) O N M L K
(E) T S R Q P

Answer with Explanation-(B). In the other

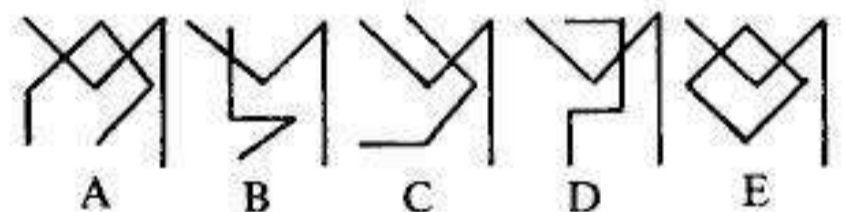
groups the letters are in reverse alphabetical order. While in this group first four letters are in reverse order and fifth letter is different.

Example 4. In the following five numbers, four are same in a certain way while the rest one is different. Find out the different one.

- (A) 28 (B) 14
(C) 49 (D) 43
(E) 35

Answer with Explanation - (D). In this except 43, all the rest number 28, 14, 49 and 35 are divisible by 7 while 43 is not divisible by 7. Hence 43 is the different number from the rest.

Example 5. Which one of the following figures is different from the rest four figures.



Answer with Explanation-(E). In the above example, each figure has two lines cutting one another, one line is the same in all the figures and the second line is different and has open ends in all the figure except in figure numbered E which forms a closed figure. Therefore, figure E is the answer.

Exercise 1

Directions—For each of the following questions five words are given, out of which four are same in a certain way while the rest one is different. Find out the different one.

1. (A) Teacher (B) Principal

- | | | | |
|--|-----------------------------|--|-------------------------------|
| (C) Student (E) Lecturer | (D) Professor | 16. (A) Stone (C) Wall (E) Sand | (B) Lime (D) Cement |
| 2. (A) Bird (C) Kite (E) Sparrow | (B) Crow (D) Pigeon | 17. (A) Sun (C) Moon (E) Horizon | (B) Cloud (D) Earth |
| 3. (A) Bowl (C) Tumbler (E) Bouquet | (B) Spoon (D) Cup | 18. (A) Moon (C) Mars (E) Venus | (B) Jupiter (D) Saturn |
| 4. (A) Beam (C) House (E) Wall | (B) Pillar (D) Roof | 19. (A) Sword (C) Shield (E) Dagger | (B) Spear (D) Arrow |
| 5. (A) Delhi (C) Madras (E) Rangoon | (B) Bombay (D) Calcutta | 20. (A) Slip (C) Run (E) Walk | (B) Swim (D) Hear |
| 6. (A) Red (C) Green (E) Blue | (B) Paint (D) Yellow | 21. (A) February (C) June (E) October | (B) April (D) August |
| 7. (A) Gold (C) Mercury (E) Sodium | (B) Silver (D) Aluminium | 22. (A) Ring (C) Ornament (E) Necklace | (B) Bracelet (D) Bangle |
| 8. (A) Eye (C) Ear (E) Finger | (B) Tongue (D) Nose | 23. (A) Bed (C) Chair (E) Table | (B) Stool (D) Bench |
| 9. (A) Handkerchief (C) Jacket (E) Kurta | (B) Shirt (D) Coat | 24. (A) Carrot (C) Sweet-potato (E) Beet | (B) Radish (D) Potato |
| 10. (A) Mango (C) Orange (E) Lemon | (B) Pear (D) Papaya | 25. (A) He-goat (C) Cow (E) Horse | (B) Ox (D) Bull |
| 11. (A) Rajesh (C) Vijay (E) Sandhya | (B) Ajay (D) Rakesh | 26. (A) Nest (C) Stable (E) Hole | (B) Boat (D) Kennel |
| 12. (A) Milk (C) Water (E) Cococola | (B) Wine (D) Curd | 27. (A) Sad (C) Jovial (E) Lively | (B) Cheerful (D) Festive |
| 13. (A) Rifle (C) Sword (E) Cannon | (B) Pistol (D) Gun | 28. (A) Helicopter (C) Chariot (E) Aircraft | (B) Steamer (D) Automobile |
| 14. (A) Chameleon (C) Snake (E) Fox | (B) Lizard (D) Cobra | 29. (A) Long jump (C) High jump (E) Hurdles Crossing | (B) Athletics (D) Running |
| 15. (A) Quick (C) Long (E) Fat | (B) Small (D) Broad | | |

26/ Reasoning

30. (A) Physics (B) Thermodynamics
(C) Optics (D) Electronics
(E) Mechanics

Directions—In each of the questions from 31 to 33., four of the five are alike in a certain way and so form a group. Which one does not belong to that group ?

31. (A) Magazine (B) Novel
(C) Thesis (D) Periodical
(E) Dictionary
32. (A) Hour (B) Week
(C) Fortnight (D) Calendar
(E) Day
33. (A) Blacksmith (B) Tailor
(C) Sailor (D) Carpenter
(E) Goldsmith

Directions—In each of the questions from 34-43, out of five words given, four have one quality or concept common which is not applicable to the fifth. Choose the odd one out.

34. (A) Square (B) Rectangle
(C) Triangle (D) Circle
(E) Area
35. (A) Paper (B) Footruler
(C) Sharpner (D) Teacher
(E) Eraser
36. (A) Bench (B) Sofa
(C) Cupboard (D) Chair
(E) Settee
37. (A) Chisel (B) Tools
(C) Hammer (D) Axe
(E) Screw driver
38. (A) Tree (B) Root
(C) Flower (D) Leaf
(E) Fruit
39. (A) Bush (B) Plant
(C) Leaf (D) Creeper
(E) Tree
40. (A) Calcutta (B) Madras
(C) Jaipur (D) Bombay
(E) Delhi

41. (A) Hut (B) Building
(C) Cottage (D) Accommodation
(E) Villa
42. (A) Kuchipudi (B) Kathak
(C) Disco (D) Manipuri
(E) Kathakali
43. (A) Sitar (B) Violin
(C) Sarod (D) Tanpura
(E) Tabla

Exercise 2

Directions—Find out the pair which is different from the others in each of the following questions.

- (A) Air and Oxygen
(B) Teacher and Student
(C) Mathematics and Geometry
(D) Flower and Petal
(E) Word and letter
- (A) Elephants and Trumpet
(B) Horses and Neigh
(C) Camels and Roar
(D) Dogs and Bark
(E) Birds and Chirp
- (A) Water and Bucket
(B) Ink and Inkpot
(C) Oil and Lamp
(D) Pen and Nib
(E) Syrup and Bottle
- (A) Patient and Hospital
(B) Criminals and Prison
(C) Student and Teacher
(D) Bird and Nest
(E) Fish and aquarium
- (A) Cycle and Scooter
(B) Rifle and Sword
(C) Pencil and Pen
(D) Tea and Coffee
(E) Shirt and Tailor
- (A) Tree - Plant
(B) Wealth - Money
(C) Wish - Desire
(D) Heavy - Light
(E) Enmity - Contrariety
- (A) Black and White
(B) In and Out

- (C) Weapons and Arms
(D) High and Low
(E) Day and Night
8. (A) Head and Cap
(B) Dhoti and Chest
(C) Hands and Gloves
(D) Feet and Shoes
(E) Legs and Trousers
9. (A) Camel and Ass
(B) Hen and Chicken
(C) Sheep and Lamb
(D) Cow and Calf
(E) Man and Child
10. (A) Horse and Stable
(B) Birds and Nest
(C) Dog and Den
(D) Sheep and Pen
(E) Pig and Sty
11. (A) Oil and Lamp
(B) Water and Ice
(C) Wood and Table
(D) Silk and Shirt
(E) Flour and Biscuit
12. (A) Sister and Brother
(B) Uncle and Aunt
(C) Grandfather and Grandson
(D) Father-in-law and Son-in-law
(E) Father and son
13. (A) Bag and Baggage
(B) Kith and Kin
(C) Pen and Pencil
(D) Bread and Butter
(E) Heart and Soul
14. (A) Husband and Wife
(B) Lion and Fox
(C) Dog and Cat
(D) Crow and Cuckoo
(E) King and Minister
15. (A) Beautiful and Handsome
(B) Bother and Worry
(C) Cold and Chilly
(D) Avoid and Seek
(E) Hobby and Recreation
16. (A) Lions and Roar
(B) Snakes and Hiss
(C) Frogs and Bleat
(D) Bees and Hum
(E) Birds and Chirp
17. (A) Daring and Timid
(B) Beautiful and Pretty
(C) Clear and Vague
(D) Youth and Adult
(E) Native and Alien
18. (A) Surdas and Tulsidas
(B) Paris and London
(C) Krishna and Kaveri
(D) Hemamalini and Maithli Sharan Gupta
(E) Red Sea and Black Sea
19. (A) Bulb and Light
(B) Clock and Time
(C) River and Tank
(D) Chimney and Smoke
(E) Ice and Cold
20. (A) Bottle and Wine
(B) Inkpot and Ink
(C) Cup and Tea
(D) Pitcher and Water
(E) Ball and Bat

Directions—(Q. 21-25) In each of the questions below, four pairs of words are given out of which the words in three pairs are related in some way and words in one pair are different. Find that one pair which is differently related.

21. (A) Night-Day (B) White-Black
(C) Light-Dark (D) Sun-Moon
22. (A) Industry-Labourers
(B) Hospital-Patients
(C) Disease-Insects
(D) Market-Buyers
23. (A) Crime-Punishment
(B) Judgement-Advocacy
(C) Enterprise-Success
(D) Exercise-Health
24. (A) Book-Pages
(B) Parliament-Members
(C) Continent-Countries
(D) Fruit-Seeds

28/ Reasoning

25. (A) Sentence – Word
(B) Hour – Minute
(C) Tree – Forest
(D) Class – Student

Directions—In each of the questions from 26 to 30, there are four pairs out of which one pair is different from the rest. Find out the different pair.

26. (A) Man – House
(B) Lion – Forest
(C) Bird – Nest
(D) Horse – Stable
27. (A) Man – Child (B) Black – Yellow
(C) Table – Chair (D) Millet – Barley
28. (A) Life – Death
(B) Poison – Nectar
(C) Cloth – Rag
(D) Thankful – Thankless
29. (A) Birds – Sky
(B) Railway – Train
(C) Aeroplane – Sky
(D) Ship – Sea
30. (A) Happiness – Joy
(B) Peace – Relief
(C) Sickness – Death
(D) Grief – War

Directions—In each of the questions from 31 to 40, four pairs of words have been given, one of which is different from the other three in some respect. Find out the one pair that is different.

31. (A) College – Principal
(B) Bank – Manager
(C) Post offices – Postman
(D) Navy – Commander
32. (A) Son – Nephew
(B) Horse – Mare
(C) Man – Lion
(D) Cock – Bull
33. (A) Wood – Saw
(B) Paper – Pen
(C) Nail – Hammer
(D) Garden – Flowers
34. (A) Army – General
(B) Ship – Captain

- (C) Bus – Driver
(D) College – Principal
35. (A) Head – Hand
(B) Van – Driver
(C) Leaf – Root
(D) Wheel – Axle
36. (A) Sun – Moon
(B) High – Low
(C) Black – White
(D) Shallow – Deep
37. (A) Father – Son
(B) Mother – Daughter
(C) Uncle – Aunt
(D) Uncle – Nephew
38. (A) Room – Floor
(B) Table – Chair
(C) Hand – Finger
(D) Tree – Branch
39. (A) Gentle – Tender
(B) Soft – Wool
(C) Hard – Stone
(D) Smooth – Glass
40. (A) Few – Many
(B) Light – Heavy
(C) Fat – Weighty
(D) Short – Tall

Exercise 3

Directions—In each of the questions from 1 to 5, four groups of letters are given. Three of them are alike in a certain way while one is different. Choose the one which is different.

1. (A) FBI (B) QMT
(C) VRY (D) HEK
2. (A) XT (B) JF
(C) RL (D) PL
3. (A) FIL (B) RUX
(C) ILO (D) LOQ
4. (A) DGI (B) MPR
(C) KND (D) FIK
5. (A) CJG (B) HNK
(C) ELI (D) JQN

Directions—In the following groups of letters, one of them is different from the rest. Find out that group.

- | | |
|--------------|----------|
| 6. (A) BCDF | (B) OPRS |
| (C) HIJL | (D) TUVX |
| 7. (A) AZBY | (B) PTQS |
| (C) CWDV | (D) GQHR |
| 8. (A) BQCR | (B) DSEU |
| (C) FVGW | (D) HXIY |
| 9. (A) FVhT | (B) LNpR |
| (C) PsVZ | (D) HMnW |
| 10. (A) ZYXW | (B) UTSR |
| (C) NMLK | (D) IHGE |
| 11. (A) YZW | (B) EPF |
| (C) NJO | (D) TVU |
| 12. (A) Cfj | (B) Djz |
| (C) Evm | (D) EVn |
| 13. (A) DiJ | (B) PgO |
| (C) LfM | (D) SdE |
| 14. (A) bcd | (B) eFg |
| (C) psv | (D) mkl |
| 15. (A) BDT | (B) QTM |
| (C) PSV | (D) CKT |
| 16. (A) EMkv | (B) Dfgj |
| (C) Kifn | (D) Qjvs |
| 17. (A) msLT | (B) joQU |
| (C) bsCM | (D) fdPj |
| 18. (A) BDFH | (B) GIKM |
| (C) UWXZ | (D) PRTV |
| 19. (A) AXUP | (B) ONKN |
| (C) GFKD | (D) VSPM |
| 20. (A) BCDE | (B) WYZA |
| (C) YZAB | (D) PQRS |

Directions—In each of the questions from 21 to 25, there are groups of letters. One of these groups is different from the other groups. Find out the different group.

- | | |
|---------------|-----------|
| 21. (A) NEXFL | (B) LANCP |
| (C) FRGSP | (D) ZGPKU |
| (E) JSAFE | |
| 22. (A) YHGCY | (B) NDWVS |
| (C) JLQNS | (D) JSXYM |
| (E) QCWRO | |

- | | |
|-----------------|-------------|
| 23. (A) WJWYO | (B) ACAZV |
| (C) GMRGS | (D) METET |
| (E) MONJK | |
| 24. (A) a d c L | (B) r p N |
| (C) i g m O | (D) r o p Z |
| (E) i t S K | |
| 25. (A) CEAR | (B) TEAR |
| (C) FEAR | (D) WEAR |
| (E) BEAR | |

Directions—In each of the questions from 26 to 31, there are four groups of letters. One of these groups is different from the other groups. Find out the different group.

- | | |
|-------------|---------|
| 26. (A) TOP | (B) ZAY |
| (C) CYO | (D) XCW |
| 27. (A) NMO | (B) CBD |
| (C) VUW | (D) XYZ |
| 28. (A) KMO | (B) GIK |
| (C) EFG | (D) ACE |
| 29. (A) A | (B) B |
| (C) E | (D) O |
| 30. (A) ZWT | (B) FCA |
| (C) SPM | (D) LIF |
| 31. (A) MNO | (B) ACD |
| (C) GIJ | (D) PRS |

Directions—In each of the questions from 32 to 34, there are four groups of letters. One of them is different from the rest. Find out the different group.

- | | |
|----------------------------|----------|
| 32. (A) ACE | (B) GIL |
| (C) EGI | (D) MOQ |
| 33. (A) BOC | (B) MIN |
| (C) XAZ | (D) SUT |
| 34. (A) ZYX | (B) YXV |
| (C) VUT | (D) TSR |
| 35. Point out the odd one. | |
| (A) RNJF | (B) SOKI |
| (C) TPLH | (D) NJFB |

Exercise 4

Directions—In each of the questions from 1 to 10, there are five numbers. Out of these four are alike in a certain way but the rest one is

different. Choose the one which is different from the rest four.

1. (A) 9 (B) 28
(C) 217 (D) 64
(E) 126
2. (A) 4756 (B) 2074
(C) 6572 (D) 9865
(E) 4677
3. (A) 24 (B) 36
(C) 42 (D) 48
(E) 12
4. (A) 37 (B) 46
(C) 23 (D) 59
(E) 67
5. (A) 3642 (B) 4249
(C) 7586 (D) 1745
(E) 3269
6. (A) 8791 (B) 1879
(C) 8971 (D) 7619
(E) 7819
7. (A) 169 (B) 121
(C) 181 (D) 144
(E) 196
8. (A) 5188 (B) 9238
(C) 8244 (D) 6311
(E) 5733
9. (A) 7314 (B) 7029
(C) 2709 (D) 3115
(E) 5128
10. (A) 1472 (B) 3848
(C) 2683 (D) 4210
(E) 1347

Directions—Find out the odd one.

11. (A) 36 (B) 64
(C) 108 (D) 54
12. (A) 212 (B) 343
(C) 757 (D) 511
13. (A) 706 (B) 507
(C) 489 (D) 250
14. (A) 49 (B) 85
(C) 121 (D) 81
15. Find out the odd one.
(A) 5 (B) 11
(C) 7 (D) 9

Exercise 5

Directions—In each of the questions from 1 to 5, which one is different from the rest ?

1. (A) Snake (B) Serpent
(C) Crocodile (D) Whale
(E) Lizard
2. (A) Cobbler (B) Carpenter
(C) Farmer (D) Potter
(E) Mason
3. (A) Jupiter (B) Saturn
(C) Venus (D) Sun
(E) Mercury
4. (A) 43 (B) 53
(C) 63 (D) 73
(E) 83
5. (A) July (B) January
(C) May (D) March
(E) September

Directions—In questions from 6 to 10, which one is different from rest of the three ?

6. (A) Breathing (B) Singing
(C) Playing (D) Writing
7. (A) Advise (B) Counsel
(C) Direct (D) Suggest
8. (A) Pluto (B) Eros
(C) Neptune (D) Venus
9. (A) Car (B) Trolley
(C) Cart (D) Sledge
10. (A) Mansion (B) Villa
(C) Garage (D) Apartment

Directions—In each of the questions from 11 to 13, four are alike in a certain way. Which is the one not like the other four ?

11. (A) Mist (B) Cloud
(C) Fog (D) Vapour
(E) Rain
12. (A) Hour (B) Day
(C) Second (D) Time
(E) Year
13. (A) Algebra
(B) Geometry
(C) Mathematics
(D) Trigonometry
(E) Arithmetic

Directions—In each of the questions from 14 and 15, which one is different from rest of the three?

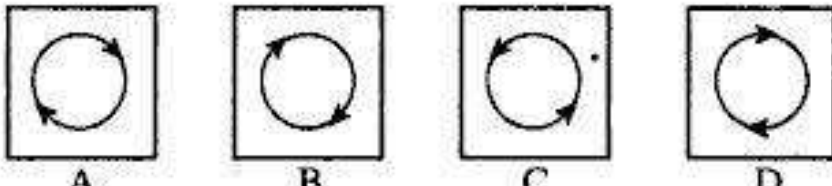
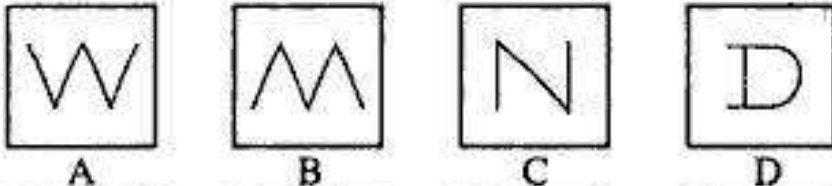
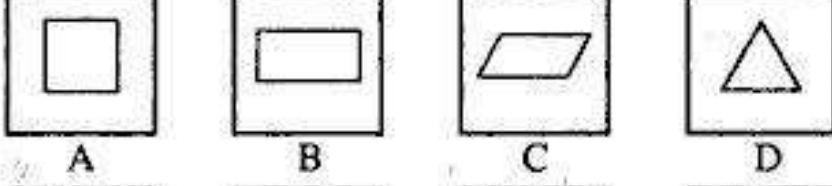
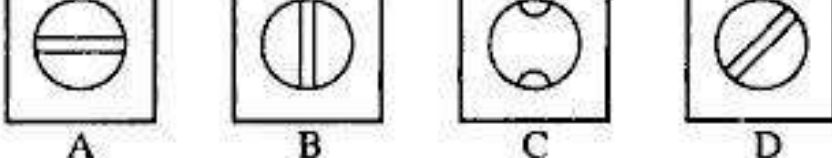
14. (A) English (B) Encyclopaedia
(C) Russian (D) German
15. (A) Hero (B) Villain
(C) Heroine (D) Artist

Directions—In each of the questions from 16 to 20, which one is different from the rest of the others?

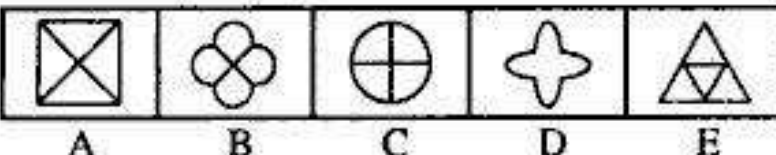
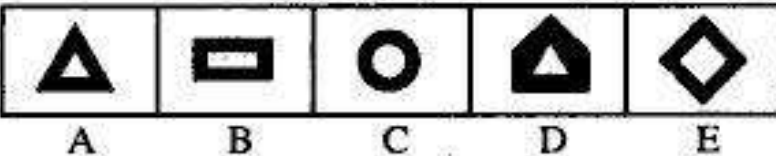
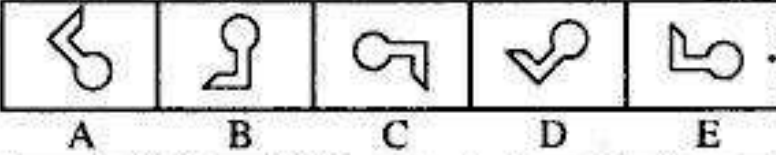
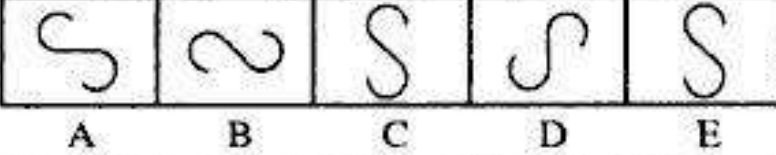
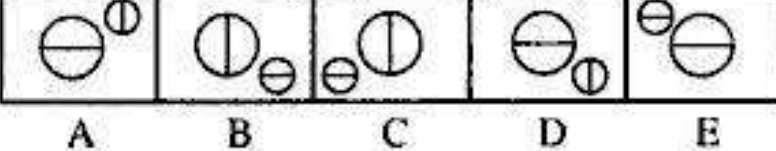
16. (A) Japan (B) Nepal
(C) France (D) China
(E) Pakistan
17. (A) Grape (B) Cashnut
(C) Pineapple (D) Apple
(E) Orange
18. (A) Orchestra (B) Flute
(C) Guitar (D) Harmonium
(E) Violin
19. (A) Bouquet (B) Garland
(C) Florist (D) Flowers
(E) Wreath
20. (A) Trousers (B) Shirt
(C) Frock (D) Coat
(E) Cloth

Exercise 6

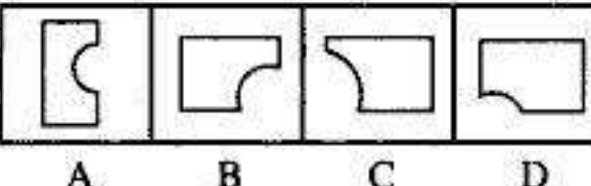
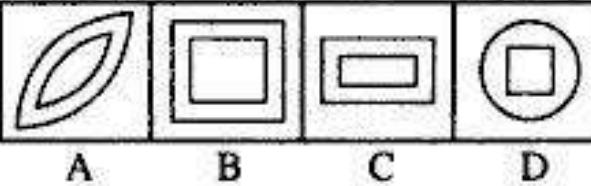
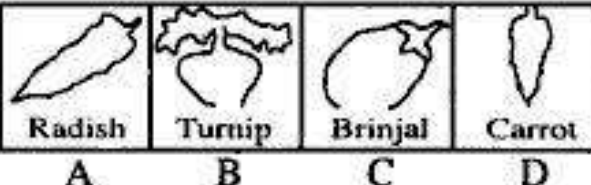
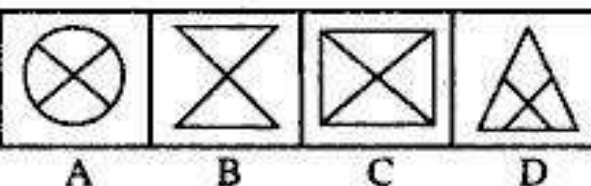
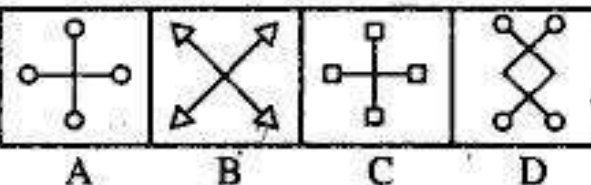
Directions—In each of the following questions, there are four figures out of which three are similar in some way but one is different from them. Find out the different one figure.

1. 
A B C D
2. 
A B C D
3. 
A B C D
4. 
A B C D

Directions— Out of the figures A, B, C, D and E, four are similar in a certain way. One figure is not like the other four. Choose the figure which is different from the rest.

5. 
A B C D E
6. 
A B C D E
7. 
A B C D E
8. 
A B C D E
9. 
A B C D E

Directions—In each of the questions from 10 to 14, there are four figures given. Of these figures three are alike in a certain way and thus form a group. One of them is different. Choose the one which is different from the remaining three.

10. 
A B C D
11. 
A B C D
12. 
A B C D
13. 
A B C D
14. 
A B C D

Answers**Exercise 1**

1. (C) All the rest are connected with teaching profession.
2. (A) All the rest are the names of birds.
3. (E) All the rest are utensils.
4. (C) All the rest are parts of a house.
5. (E) All the rest are towns of India.
6. (B) All the rest are colours.
7. (C) All the rest are solid metals.
8. (B) All the rest are external organs of a body.
9. (A) All the rest are used for wearing.
10. (E) All the rest are fruits.
11. (E) All the rest are male.
12. (D) All the rest are in liquid form.
13. (C) All the rest are fire arms.
14. (E) All the rest are reptiles.
15. (A) All the rest show size and shape.
16. (C) All the rest are building material.
17. (B) All the rest are terms concerned with Astronomy.
18. (A) All the rest are planets.
19. (C) All the rest are used for attacking.
20. (D) All the rest are connected with the movement of the body.
21. (A) All the rest months have either 30 or 31 days.
22. (C) All the rest are the different types of ornaments.
23. (B) All the rest have four legs.
24. (D) All the rest have taste.
25. (C) All the rest are male animals.
26. (B) All the rest are places of shelter for animals or birds.
27. (A) All the rest are signs of pleasure.
28. (C) All the rest need diesel or petrol for their working.
29. (B) All the rest are events.
30. (A) All the rest are different branches of Physics.

31. (E) Only Dictionary supplies us with meanings.
32. (D) All others are units of time-measurement.
33. (C) All work while living on land.
34. (E) All others are geometrical figures.
35. (D) All the rest are used for writing purpose.
36. (C) All others are meant for sitting purpose.
37. (B) All the rest are the names of different tools.
38. (A) All others are parts of a tree.
39. (C) All the rest are different forms of plants.
40. (E) All others are capital of states.
41. (D) All others are the different names of accommodation.
42. (C) All the others are classical dances.
43. (E) All others contain strings.

Exercise 2

1. (B) In all the other pairs, the second word is a part of the first.
2. (C) In all the other pairs, the second word is the cry of the first word.
3. (D) In all the other pairs, the first word is kept inside the second word.
4. (C) In all the other pairs, the first word is kept inside the second word.
5. (E) In all the other pairs, all the things are lifeless.
6. (D) In all the other pairs, the first word is the Synonym of the second word.
7. (C) In all the other pairs, the first word is the opposite of the second word.
8. (B) In all the other pairs, the second word is worn on the first word.
9. (A) In all the other pairs, the second word is the baby of the first word.
10. (C) In all the other pairs, the first word resides in the second word.
11. (A) In all the other pairs, the second word is made of the first word.

12. (B) In all the other pairs, there is a relation other than the husband-wife relation.
13. (C) In all the other pairs, the two words make phrases.
14. (E) In all the other pairs, the first word is masculine, while the second is feminine.
15. (D) In all the other pairs, the first word is the synonym of the second word.
16. (C) In all the other pairs, the second word is the cry of the first word.
17. (B) In all the other pairs, the first word is the opposite of the second word.
18. (D) In all the other pairs, the first and the second words belong to the same category.
19. (C) In all the other pairs, the second word is within the first word.
20. (E) In all the other pairs, the second word is found in the first word.
21. (D) In all the other pairs, one word is the antonym of the other.
22. (C) In all the other pairs, the first word is a workplace and second is people associated with it.
23. (B) In all the other pairs, the second word is the result of first word.
24. (D) In all the other pairs, the first is the collection of second.
25. (C) In all the other pairs, the first is the collection of second.
26. (B) In all the rest pairs, the first word lives in the second word.
27. (A) All the rest are non-living things.
28. (C) In all the rest pairs, one word is the antonym of the other.
29. (B) In all the rest pairs, first word is an article and the second is the place where it moves.
30. (D) In all the rest pairs first word is the cause and the second word is the effect.
31. (C) Manager is the head of Bank, Principal is the head of college, Commander is the head of Navy, but Postman is not the head of post-office.
32. (B) All other pairs are of masculines.
33. (D) In all other pairs, the second is used on the first.
34. (C) As driver drives a bus, such operations are not done in other pairs.
35. (B) In all other pairs, head and hand are the parts of the body, leaf and root are the parts of a tree, wheel and axle are the parts of pulley system but such a relation does not exist in van and driver.
36. (A) In all the rest pairs, one word is antonym of the other.
37. (C) In only (C) second is feminine of the first.
38. (B) In all the rest pairs, the first word is a part of the second word.
39. (A) In all the rest pairs, the first word is the quality of the second word.
40. (C) In all the other pairs, one is antonym of the other.

Exercise 3

1. (D) In each other groups, the first letter is four letters ahead of the second letter and the third letter is three letters ahead of the first letter.
2. (C) In each other groups, there is a gap of 3 letters in first and second letter.
3. (D) In each other groups, there is a gap of 2 letters between first and second letters and also a gap of 3 letters between second and third letter.
4. (C) In each other groups, there is a gap of 2 letters in first and second letters and a gap of 1 letter in second and third letters.
5. (B) In each other groups, the third letter is four letters ahead of the first letter and the second letter is three letters ahead of the third letter.
6. (B) In other groups first three letters are in alphabetical order and there is a gap of one letter between third and fourth letters group (B) is not so.
7. (D) In all other groups, 1st and 3rd letters are in alphabetical order and 2nd and 4th letters are in reverse order.
8. (B) In rest of the groups, 1st and 3rd letters are in alphabetical order and 2nd and 4th letters are in alphabetical order. While such is not the case with group (B).
9. (C) In all other groups, third letter is in small form.

10. (D) Letters in other groups are in reverse alphabetical order.
11. (A) In other groups 1st and 3rd letters are in alphabetical order.
12. (D) Second letter in other groups is in small form.
13. (C) One letter in other groups is a vowel (a, e, i, o, u).
14. (B) All the three letters in other groups are in small form.
15. (C) In all other groups letter T is used.
16. (A) In all other groups three letters are in small forms.
17. (D) In all other groups, the last letter is in capital form.
18. (C) In all other groups one letter of alphabet is missing between each two letters.
19. (B) No letter in other groups has been repeated.
20. (B) Letters in other groups are in alphabetical order.
21. (C) All the rest groups have a vowel.
22. (A) In no other group a letter has been used twice.
23. (E) In all the rest groups, a letter has been used twice.
24. (E) In all the other groups, a letter is capital.
25. (A) All the other groups form meaningful words.
26. (A) Only 'Top' is a word.
27. (D) In all the other groups, second, first and third letters are in alphabetical order.
28. (C) In all the rest groups, there is a gap of one letter between the first and second letters and also a gap of one letter between the second and third letters.
29. (B) All the rest are vowels.
30. (D) In all the rest groups, there is a gap of two letters between the first and second letters and also a gap of two letters between the second and third letters.
31. (A) In all the rest groups, there is a gap of one letter between the first and second letters.
32. (B) In all the other groups, there is a gap of one letter between the first and the second letters and also a gap of one letter between the second and third letters.
33. (C) In all the other groups, the first and the third letters are in alphabetical order.
34. (B) In all the other groups, the letters are in reverse order.
35. (B) In all the other groups, there is a gap of three letters between two consecutive letters.

Exercise 4

- (D) All the other numbers are $2^3 + 1, 3^3 + 1, 5^3 + 1, 6^3 + 1$.
- (E) In no other number, any digit is repeated.
- (C) All the other numbers are divisible by 12.
- (B) All the other numbers are prime numbers.
- (B) In no other number, any digit is repeated.
- (D) All the other numbers are formed with 1, 7, 8 and 9.
- (C) All the other numbers are perfect squares.
- (B) In all the other numbers last two digits are same.
- (A) In all the other numbers the sum of tens hundreds and thousands digits is equal to the unit digit.
- (C) In all the other numbers, the digit 4 is used.
- (B) All the rest numbers are divisible by 9.
- (D) In all the other numbers first and third digits are same.
- (C) In all the other numbers zero is used.
- (B) All the rest numbers are perfect squares.
- (D) All the rest numbers are prime numbers.

Exercise 5

- (D) All the other are reptiles.
- (C) All the rest produce some things while farmer grows.
- (D) All the others are planets.
- (C) All the rest are prime numbers.
- (E) All the rest have 31 days.

6. (A) Only Breathing is natural action.
 7. (C) In all the rest, there is option.
 8. (B) All the rest are planets.
 9. (A) All the rest are pulled by animals.
 10. (C) All the rest are places for people to live in.
 11. (E) Rain is only in liquid form.
 12. (D) All the rest are units of time.
 13. (C) All the rest are branches of Mathematics.
 14. (B) All the rest are languages.
 15. (D) All the rest are artists.
 16. (C) All the rest are the countries of Asia.
 17. (B) All the rest are fruits.
 18. (A) All the rest are the parts of the orchestra.
 19. (C) All the rest are articles made of flowers.
 20. (E) All the rest are garments.
3. (D) In all the rest, the figure is made with the help of four lines.
 4. (C) In all the rest, there are two straight lines inside the circle.
 5. (D) In all the rest, there are straight lines enclosed in the figures.
 6. (D) In all the rest, the outer figure is similar to the inner white figure.
 7. (C) In all the rest, the part protruding out has its bottom line bigger than the upper line.
 8. (B) All the rest figures are in the shape of English alphabet 'S'.
 9. (E) All the rest, the lines inside the two circles are at right angles.
 10. (A) In all the rest, circular arc is cut from one of the corner.
 11. (D) In all the rest, two figures are identical.
 12. (C) All the rest grow underground.
 13. (B) All the other figures are divided into four parts.
 14. (D) All the other figures contain plus or into signs.

Exercise 6

1. (C) In the rest, the arrows are pointing in the clockwise direction.
2. (D) In the rest, only straight lines have been used.

Series Completion Test

In this type of test some numbers and/or alphabetical letters are given. They all form a series and change in a certain order. Series has one or more letters or numbers missing. The candidates are required to observe that specific order in which the number or figure would suit for the blank space if they continue to change in the same order.

Illustration 1. Which of the alternative figures would correctly fill in the blank space in the following series of numbers :

1, 5, 10, 16, 23, 31,

- (A) 38 (B) 50
(C) 39 (D) 40
(E) 45

Answer with Explanation—(D). The difference between the first two figures *i.e.* 1 and 5 is 4 and in subsequent figures it goes on increasing by 1. As the difference between 23 and 31 is 8, therefore, the difference between 31 and the next figure which is missing, should be 9. Hence, the required number should be 40.

Illustration 2. Which one of the letter given below would come next in the series of letters ?

Z, A, Y, B, X, C

- (A) W (B) V
(C) D (D) P
(E) F

Answer with Explanation—(A). First, third and fifth letters (Z, Y and X) are in reverse alphabetical order while second, fourth and sixth letters (A, B and C) are in alphabetical order. Following the same rule, the next letter of the series should be 'W'. Hence, the correct answer is (A).

Illustration 3. Which one of the letters from the alternative answers would come next in the series given below ?

$D_4, F_5, H_6, J_7, \dots$

- (A) K_8 (B) M_8
(C) P_9 (D) L_8
(E) N_6

Answer with Explanation—(D). Each term contains a letter and a number. The letter changes leaving one letter each time while the number changes in numerical order. Therefore, after J_7 should come L_8 . Hence, the correct answer is (D).

Illustration 4. Some letters are missing in the following letter series. The missing letters are given in the proper sequence as one of the alternatives among the five given below. Find the correct alternative.

ab—abb—ab—a

- (A) abab (B) bbaa
(C) baab (D) abba
(E) aabb

Answer with Explanation—(C). If the letters of the alternative (C) are filled in blank spaces in the given letter series we get the series as follows—

abba abba abba

In the series so obtained we get that 'abba' are repeated three times. If other alternatives are filled, no order is formed in the series so obtained. Hence, the correct answer is (C).

Illustration 5. In the series given below only one number is not according to the order in which the other numbers are. Find out the wrong number.

2, 3, 5, 8, 15, 21, 34, 55.

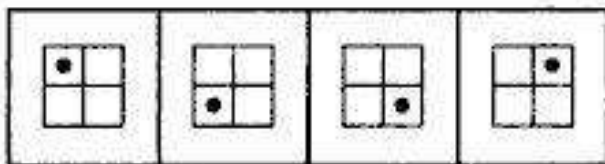
- (A) 3 (B) 5

- (C) 21 (D) 8
(E) 15

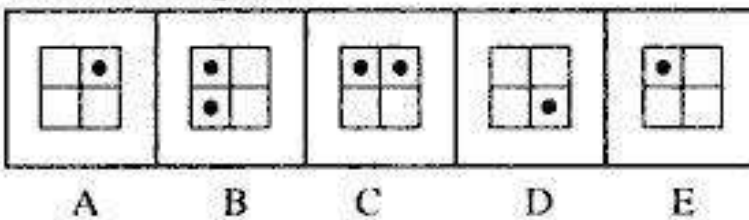
Answer with Explanation—(E). In the series we see that the third term is the sum of first and second terms. Fourth term is the sum of the second and third term. Thus each term is the sum of its previous two terms. If 15 is replaced by 13, then the order mentioned above is applicable to all terms. Hence, the wrong number is 15.

Illustration 6. Which one of the answer figures should come next in the problem figure if they continue to change in a order ?

Problem Figures



Answer Figures



Answer with Explanation—(E). In each of the problem figures a square is divided into four small squares. In the first figure, there is a small black dot in the upper left square. This black dot comes in the lower left square in figure (2). In figure (3) it comes after moving in the same direction in lower right square. Thus the black dot is moving in anticlock direction and shifts to the next small square. As in figure (4) the black dot is in the upper right square, it would be in the upper left square in the next figure.

Exercise 1

Directions—In each of the following questions, there is a number series. In this series the numbers are changing in a specific order. If they continue to change in the same way, what will be the next term ?

1. 3, 5, 7, 9,

- (A) 1 (B) 11
(C) 13 (D) 6
(E) 10

2. 4, 6, 9, 13,

- (A) 18 (B) 17
(C) 16 (D) 19
(E) 20

3. 4, 9, 16, 25,

- (A) 32 (B) 42
(C) 55 (D) 36
(E) 49

4. 0, 7, 26, 63,

- (A) 125 (B) 126
(C) 124 (D) 98
(E) 217

5. 5, 8, 12, 21,

- (A) 55 (B) 34
(C) 52 (D) 37
(E) 45

6. 3, 7, 13, 19,

- (A) 23 (B) 17
(C) 37 (D) 29
(E) 15

7. 3, 5, 9, 17,

- (A) 26 (B) 65
(C) 33 (D) 42
(E) 46

8. 8, 20, 28, 44,

- (A) 58 (B) 62
(C) 50 (D) 30
(E) 64

9. 34, 45, 56, 67,

- (A) 78 (B) 82
(C) 73 (D) 84
(E) 75

10. 3, 2, 7, 6, 11,

- (A) 8 (B) 4
(C) 10 (D) 2
(E) 6

11. 3, 6, 8, 16, 18,

- (A) 32 (B) 42
(C) 26 (D) 38
(E) 36

12. 6, 5, 24, 25,

- (A) 175 (B) 210
(C) 164 (D) 144
(E) 165

13. 1, 8, 27, 64,

- (A) 100 (B) 121
(C) 125 (D) 316
(E) 216

14. 22, 33, 66, 88,

- (A) 115 (B) 520

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- (C) 260 (D) 84
 (E) 165
15. 17, 27, 37, 56,.....
 (A) 49 (B) 62
 (C) 78 (D) 57
 (E) 63
16. 2, 3, 5, 7,.....
 (A) 12 (B) 13
 (C) 11 (D) 14
 (E) 9
17. 7, 13, 21, 31,.....
 (A) 41 (B) 43
 (C) 37 (D) 39
 (E) 40
18. 3, 15, 35, 63,.....
 (A) 69 (B) 77
 (C) 81 (D) 99
 (E) 85
19. 0, 1, 2, 4, 4, 5, 6, 7, 8, 8, 10, 11,.....
 (A) 9 (B) 11
 (C) 10 (D) 12
 (E) 13
20. 1, 1, 8, 4, 27, 9,.....
 (A) 4 (B) 6
 (C) 9 (D) 16
 (E) 64
21. 2, 20, 74, 110,.....
 (A) 115 (B) 132
 (C) 144 (D) 182
 (E) 160
22. 1, 0, 3, 2, 5, 6,.....
 (A) 9 (B) 8
 (C) 7 (D) 10
 (E) 12
23. -1, 0, 3, 8, ?,.....
 (A) 13 (B) 12
 (C) 11 (D) 10
 (E) 15
24. 1, 2, 2, 5, 3, 10,.....
 (A) 12 (B) 8
 (C) 7 (D) 4
 (E) 6
25. 5, 3, 6, 2, 7, 1,.....
 (A) 0 (B) 2
 (C) 8 (D) 4
 (E) 6

Directions—In questions 26 to 35, which one of the four numbers shall come next in the series?

26. 1, 2, 4, 8, 16, ?
 (A) 20 (B) 24
 (C) 28 (D) 32
27. 6, 3, 12, 6, 24, ?
 (A) 12 (B) 18
 (C) 30 (D) 48
28. 1, 1, 6, 6, 11, 11, ?
 (A) 11 (B) 13
 (C) 16 (D) 17
29. 64, 32, 16, 8, ?
 (A) 0 (B) 1
 (C) 2 (D) 4
30. 1, 3, 6, 10, 15, ?
 (A) 19 (B) 20
 (C) 21 (D) 22
31. 29, 23, 18, 14, ?
 (A) 9 (B) 10
 (C) 11 (D) 12
32. 2, 4, 7, 12, ?
 (A) 15 (B) 17
 (C) 19 (D) 23
33. 36, 25, 16, 9, ?
 (A) 1 (B) 2
 (C) 3 (D) 4
34. 1, 4, 9, 16, ?
 (A) 19 (B) 21
 (C) 23 (D) 25
35. 2, 4, 8, 14, 22, ?
 (A) 32 (B) 38
 (C) 48 (D) 56

Directions—In questions 36 to 45, which number will come next in the given series?

36. 0, 1, 8, 27, 64, ?
 (A) 122 (B) 125
 (C) 128 (D) 256
37. 2, 4, 7, 11, 16, ?
 (A) 18 (B) 20
 (C) 22 (D) 25
38. 5, 14, 27, 44, 65, ?
 (A) 109 (B) 90
 (C) 88 (D) 180

39. 1, 4, 10, 22, 46, ?
 (A) 68 (B) 48
 (C) 12 (D) 94
40. 3, 6, 8, 16, 19, ?
 (A) 21 (B) 38
 (C) 35 (D) 36
41. 6, 3, 12, 6, 18, ?
 (A) 9 (B) 24
 (C) 12 (D) 36
42. 3, 5, 9, 17, 33, ?
 (A) 49 (B) 48
 (C) 63 (D) 65
43. 1, 4, 9, 16, 25, ?
 (A) 30 (B) 32
 (C) 34 (D) 36
44. 17, 13, 11, 7, 5, 1, ?
 (A) 1 (B) 2
 (C) 0 (D) -1
45. 30, 24, 19, 15, 12, ?
 (A) 6 (B) 8
 (C) 10 (D) 11
46. Which is the number that comes next in this sequence?
 9, 8, 8, 8, 7, 8, 6
 (A) 5 (B) 6
 (C) 8 (D) 4
47. Complete the following series by filling the question mark:
 2, 7, 14, 23, ?, 47,.....
 (A) 28 (B) 34
 (C) 31 (D) 38
48. Which is the number that comes next in this sequence?
 4, 6, 12, 14, 28, 30
 (A) 32 (B) 64
 (C) 62 (D) 60
49. Which is the number that comes next in this sequence?
 5, 16, 51, 158,.....
 (A) 1452 (B) 483
 (C) 481 (D) 1454

50. Find the missing term in the following series.

240,....., 120, 40, 10, 2
 (A) 480 (B) 240
 (C) 220 (D) 120

Exercise 2

Directions—In each of the following questions there is a series of letters. The one term is missing. Find out the missing term.

- a k, e o, i s,....., q a, u e.
 (A) l v (B) m w
 (C) n x (D) l w
 (E) m v
- n d, i y, d t, y o, t j,.....
 (A) m p (B) n q
 (C) o f (D) o e
 (E) m e
- p r t,....., b d f, h j l, n p r.
 (A) u w y (B) v y a
 (C) x z b (D) u x w
 (E) v x z
- B D, F H, J L, N P,.....
 (A) S V (B) S U
 (C) R T (D) Q S
 (E) T V
- A C, F H, K M, P R,.....
 (A) S U (B) T V
 (C) V W (D) W
 (E) U W
- K P A, L Q B, M R C, N S D,.....
 (A) T O E (B) O E T
 (C) E T O (D) O T E
 (E) E O T
- e j o, t y d, i n s, x c h,.....
 (A) n r w (B) m s x
 (C) m r w (D) n s x
 (E) n s w
- G T Z, F S Y, E R X, D Q W,.....
 (A) C V P (B) C P V
 (C) V C P (D) V P C
 (E) P V C
- E P V, F Q W, G R X, H S Y,.....
 (A) I T Z (B) I U Z

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- (C) J I Z (D) I R Z
(E) I S Z
10. A D G, G J M,.....
(A) M O R (B) G K O
(C) M P S (D) W T Q
(E) N R W
11. W T Q, Q N K,.....
(A) K N Q (B) K I G
(C) E H K (D) K E H
(E) K H E
12. G R, I P, K N, M L,.....
(A) O J (B) Q G
(C) O K (D) S F
(E) Q S
13. P O N, R Q P, T S R, V U T,.....
(A) W U Y (B) Y X Z
(C) X W V (D) U V W
(E) Z Y X
14. A B Y, C E Y, F I Y, J N Y,
(A) T V Y (B) O R Y
(C) O P Y (D) O Q Z
(E) O T Y
15. C E, F I, J L, M P, Q S,
(A) T V (B) X Y
(C) W Y (D) T W
(E) X Z
16. U V, Q R, M N, I J,.....
(A) G H (B) C D
(C) E F (D) A B
(E) X Y
17. c x, f u, i r,....., o l, r i
(A) l o (B) m n
(C) n o (D) o p
(E) o r
18., z x v, f d b, l j h, r p n.
(A) y w v (B) a y v
(C) t r p (D) l z x
(E) w x u
19., s i y, o e u, k a q, g w m, c s i
(A) w n c (B) w n b
(C) v n c (D) v m c
(E) w m c
20. a k u, f p z,, p z j, u e o, z j t.
(A) k u e (B) j t d
(C) j u e (D) k v e
(E) u k v

21. d e b, i j g, n o l,....., x v y
(A) r s p (B) s t p
(C) r s q (D) s t q
(E) s t o
22. c e d, i h g, l k m,, u t s
(A) n p o (B) o r q
(C) o q p (D) q r o
(E) n p q
23. r n p, t p r, v.....
(A) y p (B) b y
(C) d z (D) o a
(E) r t
24. h g f, k j i, n.....
(A) l p (B) o q
(C) p r (D) m l
(E) u p
25. a r, c s, e t,.....
(A) w y (B) x z
(C) g u (D) v b
(E) v i
26. What will come in place of question mark (?) in the following series ?

AB DEF HIJK ? STUVWX
(A) MNOPQ (B) LMNOP
(C) LMNO (D) QRST
(E) None of these

27. Which letter should be in place of the question mark in the following series ?

G H J M ? V
(A) T (B) S
(C) R (D) U
(E) Q

28. What will come in place of question mark (?)
- AZ, BY, CX, ?
(A) EF (B) GH
(C) DE (D) DW

Directions—Which one of the letters given below each question from 29 to 33, will come in blank space ?

29. B, F, K, Q,.....
(A) X (B) R
(C) T (D) Y

30. BG, GC, HN, N
 (A) D (B) J
 (C) I (D) H
31. B, A, Z, D, C, Y, F, E,
 (A) W (B) X
 (C) U (D) G
32. X, U, R, O, L,
 (A) M (B) J
 (C) K (D) I
33. BA, YZ, DC, WX,
 (A) DE (B) EF
 (C) FE (D) FG
34. What will be the next term in ?
 DCXW, FEVU, HGTS, ...
 (A) LKPO (B) ABYZ
 (C) JIRQ (D) LMRS
- Directions**—In each of the questions from 35 to 41, which terms will be in the blank space ?
35. BCYXEFVU
 (A) H, I (B) R, r
 (C) I, J (D) S, T
 (E) J, I
36. ZXVTR
 (A) O, K (B) N, M
 (C) K, S (D) M, N
 (E) P, N
37. C, e, G, i, K
 (A) o, K (B) m, O
 (C) k, M (D) M, k
 (E) O, p
38. A/2, B/4, C/6, D/8,
 (A) E/16, F/32 (B) F/32, I/14
 (C) F/12, E/16 (D) E/10, F/12
 (E) G/10, I/14
39. C-3, E-5, G-7, I-9,
 (A) X-24, M-21 (B) K-11, M-13
 (C) O-15, X-24 (D) M-18, K-14
 (E) K-10, Z-5
40. AZXBVTCR
 (A) P, D (B) E, O
 (C) Q, E (D) O, Q
 (E) Q, O

41. Q, L, ...E, C,
 (A) B, A (B) I, G
 (C) A, G (D) G, B
 (E) H, B
42. Which one of the answer would be in place of question mark in the following series ?
 A, CD, GHI, ?, UVWXY
 (A) LMNO (B) MNO
 (C) NOPQ (D) NOP
 (E) MNOP

Exercise 3

Directions—In each of the following questions, one term in the number series is wrong. Find out the wrong term.

- 49, 48, 45, 42, 33, 24, 13
 (A) 48 (B) 45
 (C) 42 (D) 33
 (E) 24
- 4, 6, 9, 18, 34, 59, 95
 (A) 9 (B) 6
 (C) 18 (D) 34
 (E) 95
- 2, 6, 10, 16, 20, 28, 35, 45
 (A) 10 (B) 16
 (C) 20 (D) 28
 (E) 35
- 1, 4, 7, 11, 16, 22, 29
 (A) 1 (B) 4
 (C) 22 (D) 11
 (E) 29
- 3, 18, 38, 78, 123, 178, 243
 (A) 123 (B) 178
 (C) 3 (D) 38
 (E) 18
- 7, 28, 63, 124, 215, 342, 511
 (A) 7 (B) 28
 (C) 124 (D) 215
 (E) 342
- 2, 5, 10, 18, 26, 37, 50
 (A) 2 (B) 5
 (C) 37 (D) 18
 (E) 50
- 17, 19, 23, 29, 33, 37, 41
 (A) 17 (B) 19

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- (C) 23 (D) 29
(E) 33
9. 3, 10, 19, 31, 43, 58, 75
(A) 31 (B) 43
(C) 58 (D) 10
(E) 19
10. 58, 57, 54, 50, 42, 33, 22
(A) 57 (B) 54
(C) 50 (D) 42
(E) 33
11. 720, 120, 24, 8, 2, 1, 1
(A) 1 (B) 2
(C) 24 (D) 8
(E) 120
12. 89, 78, 86, 80, 85, 82, 83
(A) 78 (B) 86
(C) 80 (D) 85
(E) 82
13. 112, 114, 120, 124, 132, 142, 154
(A) 114 (B) 120
(C) 124 (D) 132
(E) 142
14. 5, 11, 23, 47, 96, 191, 383
(A) 11 (B) 23
(C) 47 (D) 96
(E) 191
15. 3, 4.5, 9, 22.5, 67.5, 270, 945
(A) 4.5 (B) 9
(C) 22.5 (D) 67.5
(E) 270
16. 380, 188, 92, 48, 20, 8, 2
(A) 188 (B) 92
(C) 48 (D) 20
(E) 8
17. 7, 9, 17, 42, 91, 172, 293
(A) 9 (B) 17
(C) 42 (D) 91
(E) 172
18. 720, 96, 24, 6, 2, 1, 1
(A) 120 (B) 6
(C) 1 (D) 96
19. 2, 20, 27, 44, 64
(A) 27 (B) 8
(C) 20 (D) 44
20. 0, 1, 2, 4, 4, 5, 6, 6, 8, 7, 10.
(A) 6 (B) 5
(C) 1 (D) 2
21. Which one of the number is wrong in the series ?
0, 1, 3, 6, 10, 15, 21, 28, 37, 45
(A) 0 (B) 10
(C) 45 (D) 37
- Directions**—In each of the questions from 22 to 26, one term is wrong in the series. Find out the wrong term.
22. 36, 54, 18, 27, 22.5, 13.5, 4.5
(A) 13.5 (B) 18
(C) 22.5 (D) 27
(E) 54
23. 169, 218, 254, 269, 295, 304, 308
(A) 304 (B) 254
(C) 269 (D) 218
(E) 275
24. 22, 33, 66, 99, 121, 297, 594
(A) 297 (B) 121
(C) 99 (D) 66
(E) 33
25. 46080, 3840, 384, 48, 24, 2, 1
(A) 3840 (B) 384
(C) 48 (D) 24
(E) 2
26. 582, 605, 588, 611, 634, 617, 600
(A) 634 (B) 617
(C) 611 (D) 634
(E) 588
- Directions**—In each of the questions from 27 to 31, one term is wrong in the series. Find out the wrong term.

27. 8, 13, 21, 32, 47, 63, 83
 (A) 21 (B) 13
 (C) 32 (D) 83
 (E) 47
28. 12, 18, 27, 90, 270, 945, 3780
 (A) 20 (B) 18
 (C) 945 (D) 27
 (E) 270
29. 7, 14, 56, 168, 336, 1344, 2688, 8064
 (A) 1344 (B) 56
 (C) 2688 (D) 8064
 (E) None of these
30. 36, 49, 100, 144, 196, 256, 324
 (A) 100 (B) 49
 (C) 256 (D) 144
 (E) 36
31. 105, 85, 60, 30, 0, -45, -90
 (A) 0 (B) 30
 (C) 85 (D) -45
 (E) -90
32. Find out the wrong number in the series.
 15, 45, 90, 360, 1080, 2160, 6480
 (A) 90 (B) 360
 (C) 6480 (D) 1080
 (E) 2160

Directions—In each of the questions from 33 to 47, find out the wrong term in each series.

33. 8, 14, 26, 48, 98, 194, 386
 (A) 194 (B) 98
 (C) 14 (D) 386
 (E) 48
34. 325, 259, 202, 160, 127, 105, 94
 (A) 127 (B) 259
 (C) 94 (D) 202
 (E) 105
35. 54, 43, 34, 26, 22, 19, 18
 (A) 34 (B) 26
 (C) 43 (D) 18
 (E) 22
36. 3, 4, 10, 32, 136, 685, 4116
 (A) 136 (B) 10
 (C) 4116 (D) 685
 (E) 32
37. 16, 17, 21, 30, 45, 71, 107
 (A) 21 (B) 107
 (C) 16 (D) 45
 (E) 71
38. 112, 114, 120, 124, 132, 142, 154
 (A) 114 (B) 120
 (C) 124 (D) 132
 (E) 142
39. 5, 11, 23, 47, 96, 191, 383
 (A) 11 (B) 96
 (C) 191 (D) 23
 (E) 47
40. 3, 4.5, 9, 22.5, 67.5, 270, 945
 (A) 270 (B) 4.5
 (C) 22.5 (D) 9
 (E) 67.5
41. 380, 188, 92, 48, 20, 8, 2
 (A) 188 (B) 92
 (C) 48 (D) 20
 (E) 8
42. 7, 9, 17, 42, 91, 172, 293
 (A) 42 (B) 172
 (C) 17 (D) 91
 (E) 9

Exercise 4

Directions—In each of the following questions, one number-series is given. In each series one number is wrong. After searching the wrong number find out the correct number in its place.


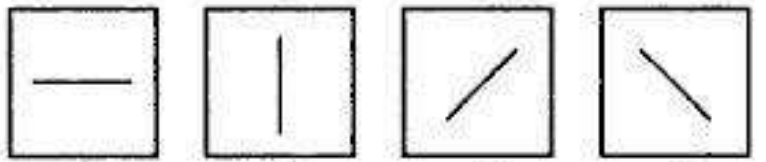
1. 510, 254, 126, 64, 30, 14, 6
 (A) 252 (B) 124
 (C) 62 (D) 32
 (E) 8
2. 8, 12, 16, 23, 32, 43, 56
 (A) 11 (B) 21
 (C) 9 (D) 52
 (E) 28
3. 5, 10, 17, 26, 39, 50, 65
 (A) 15 (B) 25
 (C) 35 (D) 37
 (E) 48
4. 3, 5, 7, 11, 13, 17, 21
 (A) 19 (B) 15
 (C) 9 (D) 14
 (E) 23
5. 2, 9, 17, 65, 126, 217, 344
 (A) 35 (B) 125
 (C) 126 (D) 217
 (E) 344


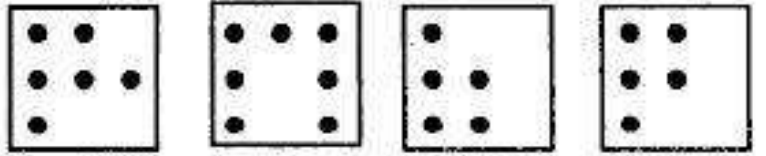
- (C) 8 (D) 19
 (E) 28
6. 9, 25, 49, 89, 121, 169, 225
 (A) 120 (B) 81
 (C) 64 (D) 36
 (E) 16
7. 4, 25, 100, 289, 652, 1369, 2500
 (A) 978 (B) 342
 (C) 652 (D) 2022
 (E) 1580

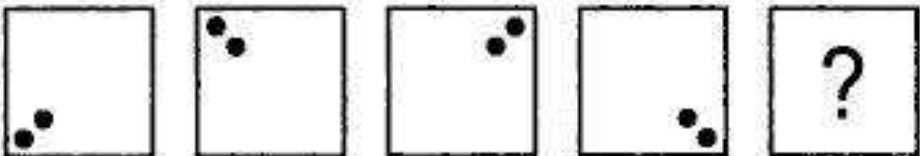
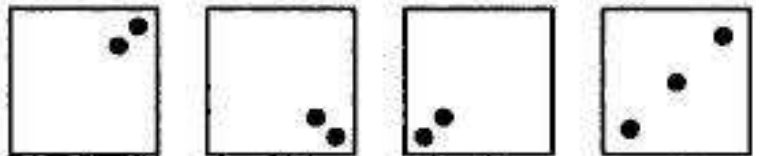
8. 240, 240, 120, 40, 20, 2
 (A) 50 (B) 30
 (C) 10 (D) 1
 (E) 15
9. 0, 9, 64, 169, 576, 1225
 (A) 289 (B) 666
 (C) 1369 (D) 225
 (E) 125
10. 95, 86, 73, 62, 47, 30, 11
 (A) 75 (B) 47
 (C) 74 (D) 65
 (E) 93

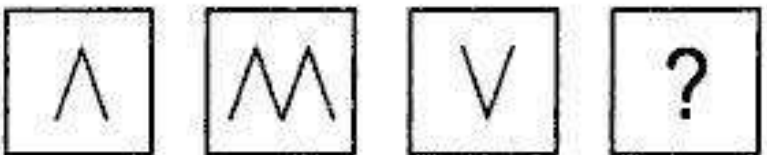
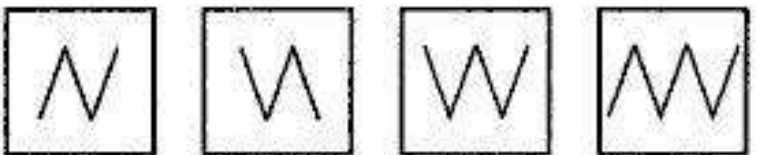
Exercise 5

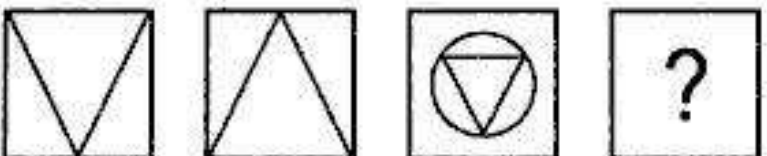
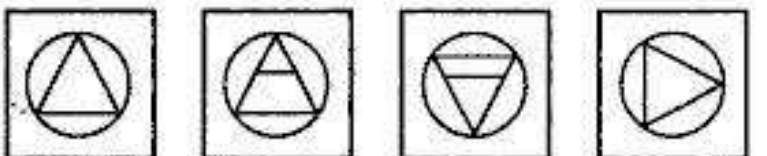
Directions—In each of the questions given below which one of the answer figures on the right should come in place of question mark on the left, if the sequence were continued.

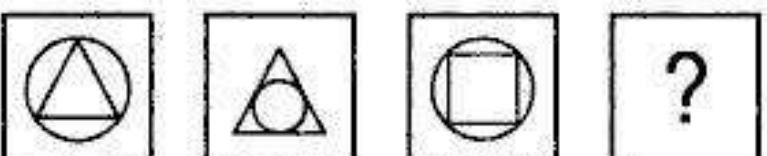
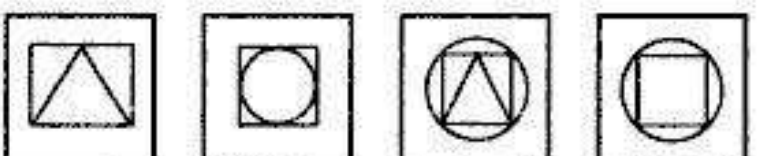
1.  

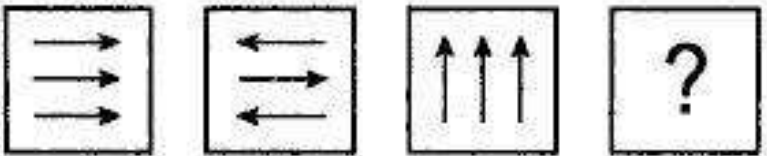
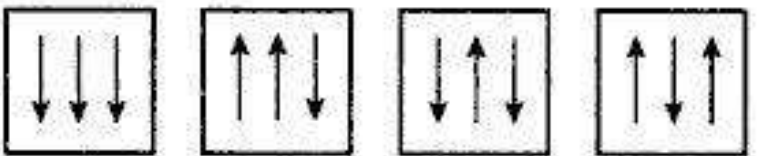
2.  

3.  

4.  

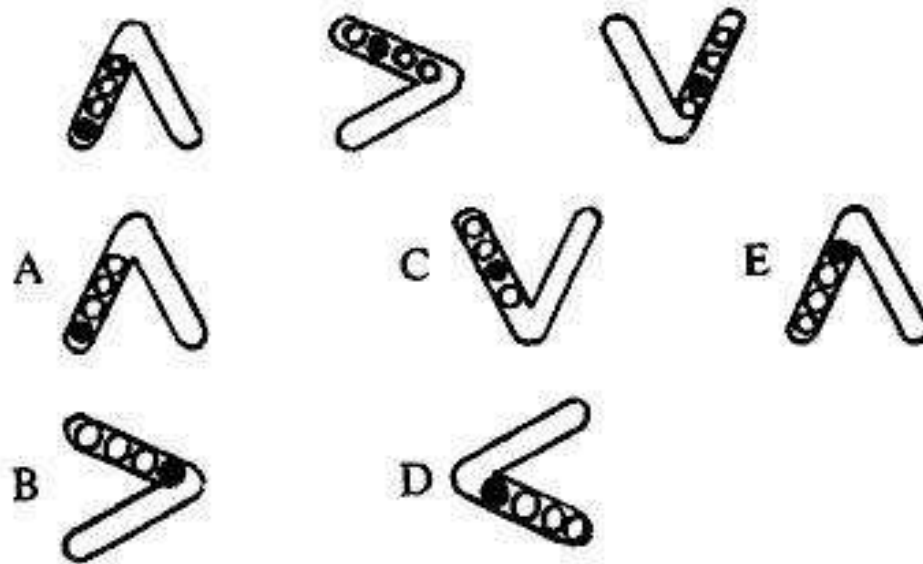
5.  

6.  

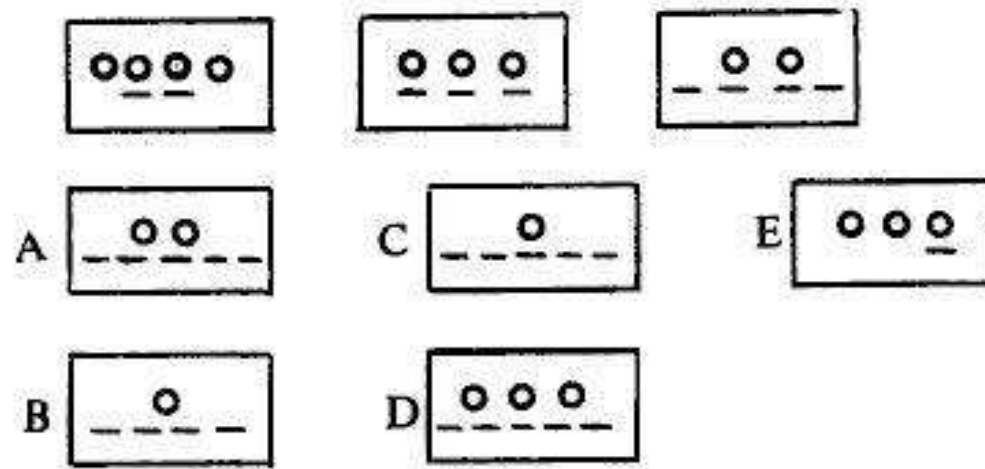
7.  

Directions—In each of the following questions, three figures are changing in a specific way. If they continue to change in the same way, which one of the five answer would come next in the problem figures ?

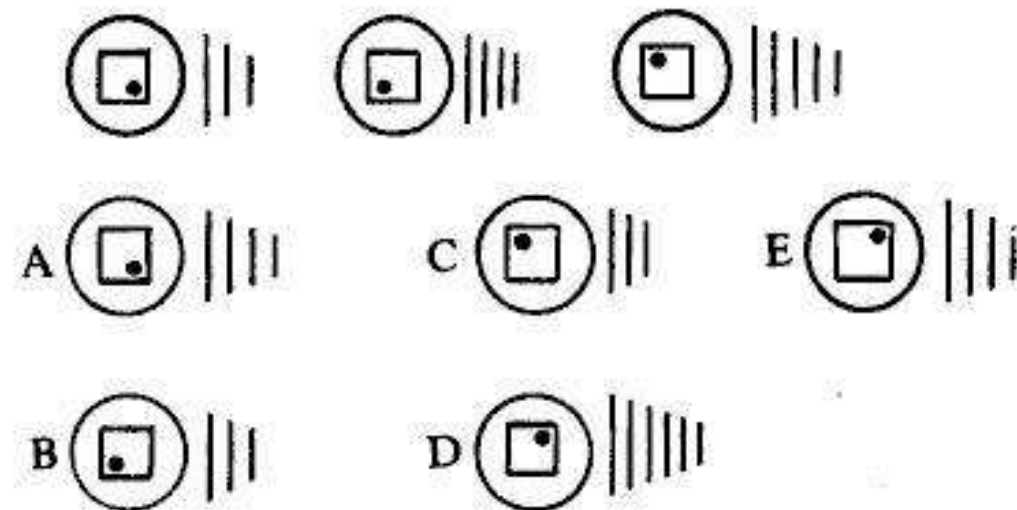
8.



9.



10.



11.

