

Paper-I General

1. A student centric method of teaching is
 - a. Lecture
 - b. Online video
 - c. Group discussion
 - d. Assignment
2. The term that best describes the process of acquiring specific skills is
 - a. Training
 - b. Learning
 - c. Teaching
 - d. Experiencing
3. The level of teaching with highest valuation is
 - a. Memory level
 - b. Understanding level
 - c. Reflective level
 - d. Rote level
4. Detailed plan with course material and method of teaching is called as
 - a. Syllabus
 - b. Notes
 - c. Curriculum
 - d. Précis
5. The single most essential trait of a teacher is
 - a. Command over language
 - b. Knowledge of the subject
 - c. Desire to teach
 - d. Humorous nature
6. Teaching aids are useful for all of the following aspect of learning process EXCEPT
 - a. Memory
 - b. Understanding
 - c. Aptitude
 - d. Enthusiasm

7. An example of informal learning is
- Group discussion
 - Online lectures
 - Classroom teaching
 - Social interaction
8. The examination that you are currently participating in is best described as
- Placement evaluation
 - Diagnostic evaluation
 - Formative evaluation
 - Summative evaluation
9. A researcher is studying the views of people in a country regarding the role of WHO during Covid-19. This type of research is best termed as
- Quantitative research
 - Qualitative research
 - Deductive research
 - Inductive research
10. Amongst the following components of a research paper, the most essential components is
- Introduction
 - Method
 - Result
 - Discussion
11. In order to find out the percentage of people who have been vaccinated in a large company of 10,000 employees, the researcher write the ID numbers of employee on chits and then pick the chits after mixing them to select 100 employees for collection of data. This type of sampling is best termed as
- Convenient sampling
 - Clustered sampling
 - Stratified sampling
 - Random sampling
12. Which of the following will NOT qualify as appropriate research ethics?
- To maintain the confidentiality of the participants
 - To record additional information without telling participants
 - To record same parameters with multiple methods
 - To record same parameter multiple times during the course of study

13. Amongst the following options, the best way to evaluate the value of published paper is
- Journal in which the paper is published
 - Country from where the paper is published
 - Number of authors in the paper
 - Citation of the paper
14. All of the following can be considered as research except
- Study to find out relationship between two measurable variables
 - Study to find out mechanism of an observed phenomenon
 - Study to prove what you already believe in
 - Study to recheck the finding of earlier published research
15. The calculation of number of participants in a study (Sample size) is based on
- Available persons
 - Feasibility
 - Standard deviation of the variable to be measured
 - Cost of the study
16. A researcher has recorded a satisfaction level of consumers who use online sales portal by asking them to rate their experience on a scale of 1 to 5. The data obtained by the researcher is best classified as
- Nominal
 - Ordinal
 - Continuous
 - Discrete
17. A researcher has collected data regarding marks obtained in the final exams and attendance of students in a school. The best method to scientifically show an association between two variables is
- Comparison of mean values of marks with mean values of attendance
 - Comparison of standard deviation of marks with standard deviation of attendance
 - Determination of correlation of marks with attendance
 - Data not enough to determine association between marks and attendance

18. Hybrid Cars are vehicles that have the capability of running either on electric power or petroleum products. Running a hybrid car in electric mode has the advantage of cutting down on the gas emissions produced by a petroleum fuelled car. Hybrid cars do not have as high accelerations compared to conventional cars and their capacity is lower compared to larger petrol vehicles. Even though running a hybrid car can be cheaper, their purchasing costs are much higher than that of a petrol car.

Which of the following can be best inferred based on the above passage?

- a. Road trips take longer in hybrid cars.
 - b. It is more profitable for car manufacturers to produce hybrid cars.
 - c. Hybrid cars have certain lacunae compared to petrol cars
 - d. Gas emissions of petrol cars contribute to global warming.
19. Mr Y starts walking northwards for 1 km and then turns westwards and walks for another 1 km. He then turns by 135 degrees to his left and walks for another 2 km. From his starting point, Mr Y is now
- a. northwest
 - b. Southwest
 - c. Northeast
 - d. Southeast
20. A man, woman, dog and duck entered into a park at different times on a day. Read the statements carefully:
- i) The man entered before the dog.
 - ii) The bird entered at last.
 - iii) The woman entered after the dog but before the duck.
- Who entered the park at first?
- a. Man
 - b. Woman
 - c. Duck
 - d. Dog
21. Suraj, Dalbir, John and Irfan are friends. Suraj is taller than John but shorter than Dalbir. The height of Dalbir is 6 feet. Irfan is tallest of all four friends. Which of the following statements is NOT correct?
- a. John is shortest of all four friends.
 - b. Height of Irfan is more than 6 feet.
 - c. Suraj is less than 6 feet tall.
 - d. Dalbir is taller than Irfan.

22. Observe and analyse the series of numbers given below

0, 1, 1, 2, 3, 5, X, 13, 21

The number at location X is

- a. 6
- b. 7
- c. 8
- d. 9

23. If FAN is written as GBO, then CAT will be written as :

- a. DBU
- b. GBU
- c. DAU
- d. TBU

24. If LOVE is written as PSZI, then NOTE will be written as:

- a. RSXI
- b. RSZI
- c. PZSJ
- d. RSXJ

25. In a row of students, A was placed 5th from the left while the B was placed 7th from the right. When A and B exchanged their places, the A became 19th from the left. From the centre of row, how far right A is now placed?

- a. 4th
- b. 5th
- c. 6th
- d. 7th

26. Consider the following statement made by a teacher in a class to a student "The way you answer to the questions asked in class, you will make a good spokesperson for a political party"

This statement is best classified as

- a. Mass communication
- b. Meta communication
- c. Formal communication
- d. Horizontal communication

27. All of the following forms of communication provide an opportunity for a feedback EXCEPT

- a. Formal communication
- b. Informal communication
- c. Mass communication
- d. Non-verbal communication

28. All of the following can be considered as a form of communication EXCEPT
- Debate
 - Seminar
 - Group discussion
 - Observing conversation between two persons
29. A researcher is recording weight, age, daily food consumption and daily exercise in a group of students. In this study, the variable that can be classified as dependent variable is
- Weight
 - Age
 - Daily food consumption
 - Daily exercise
30. A researcher has sampled 1000 persons from five cities and collected information whether they had Covid-19 infection. The number of persons sampled in each is different. The best way to graphically present this data is
- Line diagram
 - Pie chart
 - Scatter plot
 - Box plot
31. A research study showed that increase in age is associated with decrease in the bone mineral density and the increase in percentage greying of hair. On the basis of this information, which of the following statements CANNOT be true?
- Bone mineral density negatively correlates with age
 - Bone mineral density positively correlates with age
 - Percentage greying of hair positively correlates with age
 - Percentage greying of hair negatively correlates with bone mineral density
32. Carefully read the following words:
1. Vote, 2. Polling booth, 3. Campaign, 4. Minister.
The most meaningful order of arrangement is
- 4, 3, 1, 2
 - 3, 4, 1, 2
 - 3, 2, 1, 4
 - 2, 1, 3, 4

33. The function that is done by brain in human beings, the same function is done in computers by
(Human : Brain :: Computer : ?)

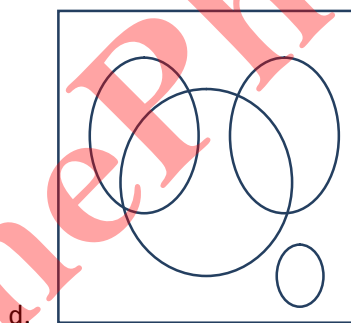
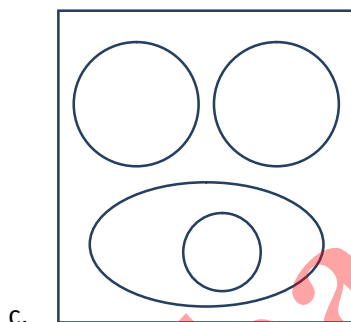
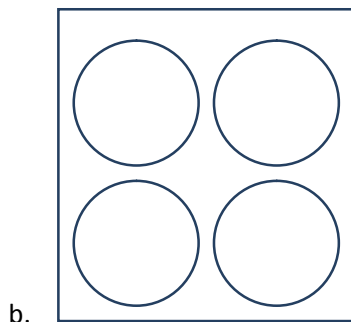
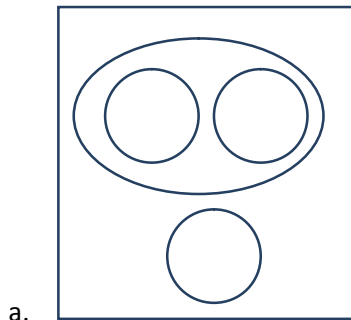
- a. Hard disc
- b. Random access memory
- c. Central processing unit
- d. Software

34. People are related to bus in the same way as oxygen is related to

(People : Bus :: Oxygen : ?)

- a. Lungs
- b. Heart
- c. Blood vessels
- d. Red blood cells

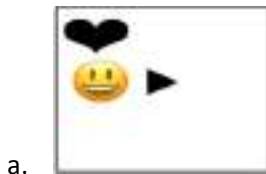
35. Which Venn diagram best describes the relationship between Earth, Venus, Sun and Planets?



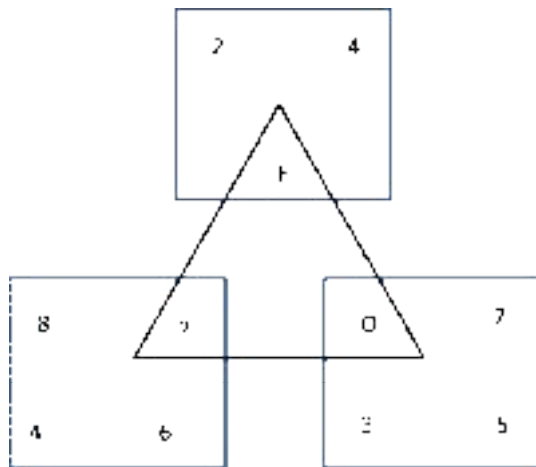
36. Carefully observe the sequences of images given below



Which of the following best fits in place of the question mark?



37. Which alphabet should replace the question mark?



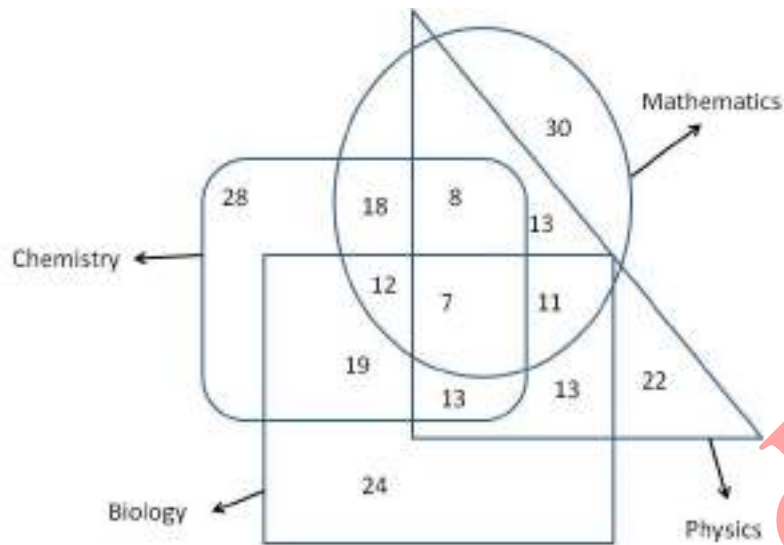
- a. X
- b. R
- c. S
- d. U

38. Carefully read the following words and choose the odd one out.

Fair, Just, Objective, Quiet, Impartial, Unbiased

- a. Just
- b. Quiet
- c. Unbiased
- d. Fair

39. The venn diagram given below shows the numbers of students obtaining a pass grade in the departments of physics, chemistry, mathematics and biology at a university.



What is the total number of students who have obtained a pass grade in both Mathematics and Physics?

- a. 11
b. 13
c. 24
d. 39
40. Which of the following is related to resolution of a camera?
- a. Megapixel
b. Megabytes
c. Megabits
d. Megacam
41. Which of the following is NOT used for biometrics
- a. Iris scan
b. Finger print
c. DNA print
d. Retinal scan
42. In comparison to classroom teaching, the definitive advantage of online teaching is
- a. Accuracy of information
b. Accessibility
c. Personal touch
d. Collective learning

43. LED, LCD, CRT are the names related to different types of
- Monitors
 - Printers
 - Sound Systems
 - Semiconductors
44. An educational institution would generally have the following in its domain name
- .org
 - .edu
 - .inst
 - .com
45. Which contents are lost when the computer turns off?
- Storage
 - Input
 - Output
 - Memory
46. A word in a web page that, when clicked, opens another document is called
- Anchor
 - Hyperlink
 - Reference
 - URL
47. Personal computers can be connected together to form a
- Server
 - Supercomputer
 - Enterprise
 - Network
48. All of the following are input device for a computer EXCEPT
- Keyboard
 - Mouse
 - Touch pad
 - Printer

49. Amongst the computer applications listed below, pick the odd one out

- a. Zoom
- b. Meet
- c. Webex
- d. Whatsapp

50. The application best suited for database management is

- a. MS word
- b. MS excel
- c. MS powerpoint
- d. MS access

Paper-II Pharmacology

51. The therapeutic index of a drug is a measure of its:
- Safety
 - Potency
 - Efficacy
 - Dose variability
52. The following allergic drug reaction is caused by circulating antibodies:
- Serum sickness
 - Anaphylactic shock
 - Systemic lupus erythematosus
 - Angioedema
53. Select the longer acting ocular beta blocker:
- Timolol
 - Betaxolol
 - Cartirolol
 - Levobunolol
54. Phenylephrine instilled in the eye produces:
- Mydriasis but no cycloplegia
 - Cycloplegia but no mydriasis
 - Both mydriasis and cycloplegia
 - Neither mydriasis nor cycloplegia
55. Which of the following is an irreversible inhibitor of cyclooxygenase:
- Aspirin
 - Phenylbutazone
 - Indomethacin
 - Piroxicam
56. Which of the following is a prodrug:
- Hydralazine
 - Clonidine
 - Captopril
 - Enalapril

57. Select the receptor that is located intracellularly:

- a. Opioid μ receptor
- b. Steroid receptor
- c. Prostaglandin receptor
- d. Angiotensin receptor

58. Higher efficacy of a drug necessarily confers:

- a. Greater safety
- b. Therapeutic superiority
- c. Capacity to produce more intense response
- d. Cost saving

59. An undesirable effect of a drug that occurs at therapeutic doses and can be predicted from its pharmacological actions is called:

- a. Side effect
- b. Toxic effect
- c. Allergic reaction
- d. Idiosyncrasy

60. Which of the following organs is innervated only by parasympathetic nerves:

- a. Iris muscles
- b. Ciliary muscle
- c. Sweat glands
- d. Splenic capsule

61. Select the route of administration which carries the highest risk of adversely affecting vital functions:

- a. Intra-arterial injection
- b. Intrathecal injection
- c. Intravenous injection
- d. Intramuscular injection

62. Majority of drugs cross biological membranes primarily by:

- a. Passive diffusion
- b. Facilitated diffusion
- c. Active transport
- d. Pinocytosis

63. Active transport of a substance across biological membranes has the following characteristics except:
- It is specific
 - It is pH dependent
 - It is saturable
 - It requires metabolic energy
64. The most important factor governing absorption of a drug from intact skin is:
- Molecular weight of the drug
 - Site of application
 - Lipid solubility of the drug
 - Nature of the base used in the formulation
65. The following drug metabolizing reaction is entirely nonmicrosomal:
- Glucuronide conjugation
 - Acetylation
 - Oxidation
 - Reduction
66. The loading dose of a drug is governed by its:
- Renal clearance
 - Plasma half life
 - Volume of distribution
 - Elimination rate constant
67. The following receptor has an intrinsic ion channel:
- Histamine H1 receptor
 - Histamine H2 receptor
 - Adrenergic alfa receptor
 - GABA-benzodiazepine receptor
68. The dose of the following class of drugs has to be adjusted by repeated measurement of the affected physiological parameter:
- Oral contraceptives
 - Antiepileptics
 - Antidepressants
 - Oral anticoagulants

69. In patients with renal insufficiency the clearance of the following drug is reduced parallel to the reduction in creatinine clearance:
- Propranolol
 - Digoxin
 - Lignocaine
 - Verapamil
70. The most appropriate route of administration for adrenaline in a case of anaphylactic shock is:
- Intracardiac
 - Intravenous
 - Intramuscular
 - Subcutaneous
71. The cardiac muscarinic receptors:
- Are of the M1 subtype
 - Are of the M2 subtype
 - Are selectively blocked by pirenzepine
 - Function through the PIP₂ → IP₃/DAG pathway
72. The smooth muscle structure that is relaxed by cholinergic drugs is:
- Colon
 - Gastric fundus
 - Major bronchi
 - Bladder trigone
73. Actions of pilocarpine include the following except:
- Sweating
 - Salivation
 - Miosis
 - Cycloplegia
74. Pyridostigmine differs from neostigmine in that:
- It is more potent orally
 - It is longer acting
 - It produces less muscarinic side effects
 - It does not have any direct action on NM receptors

75. The following is an α_2 adrenergic agonist used as eye drops to lower intraocular pressure:

- a. Brinzolamide
- b. Bambuterol
- c. Brimonidine
- d. Latanoprost

76. Atropine does not antagonise the following feature of anticholinesterase poisoning:

- a. Hypotension
- b. Central excitation
- c. Muscle paralysis
- d. Bronchoconstriction

77. Inhaled ipratropium bromide has the following advantages except:

- a. It does not alter respiratory secretions
- b. It does not depress airway mucociliary clearance
- c. It has faster onset of bronchodilator action than inhaled salbutamol
- d. It only rarely produces systemic side effects

78. The most suitable mydriatic for a patient of corneal ulcer is:

- a. Atropine sulfate
- b. Homatropine
- c. Cyclopentolate
- d. Tropicamide

79. The rate limiting enzyme in the synthesis of catecholamines is:

- a. Tyrosine hydroxylase
- b. Dopa decarboxylase
- c. Dopamine β -hydroxylase
- d. Noradrenaline N-methyl transferase

80. The following is a selective α_2 adrenoceptor antagonist:

- a. Prazosin
- b. Phentolamine
- c. Yohimbine
- d. Clonidine

81. The drug that can directly release histamine from mast cells without involving antigen-antibody reaction is:

- a. Aspirin
- b. Procaine
- c. Morphine
- d. Sulfadiazine

82. The smooth muscle stimulating action of 5-HT is most marked in the:

- a. Bronchi
- b. Intestines
- c. Ureter
- d. Biliary tract

83. Select the antibiotic whose dose must be reduced in patients with renal insufficiency:

- a. Ampicillin
- b. Chloramphenicol
- c. Tobramycin
- d. Erythromycin

84. The preferred drug for controlling an acute exacerbation of ulcerative colitis is:

- a. Prednisolone
- b. Sulfasalazine
- c. Mesalazine
- d. Vancomycin

85. Aspirin prolongs bleeding time by inhibiting the synthesis of:

- a. Clotting factors in liver
- b. Prostacyclin in vascular endothelium
- c. Cyclic AMP in platelets
- d. Thromboxane A₂ in platelets

86. Which of the following peptides is a selective vasopressin V₂ receptor agonist:

- a. Arginine vasopressin
- b. Desmopressin
- c. Lypessin
- d. Terlipressin

87. The following antihypertensive is used topically to treat alopecia areata:

- a. Hydralazine
- b. Prazosin
- c. Minoxidil
- d. Indapamide

88. Long-term hydralazine therapy is likely to cause:

- a. Gynaecomastia
- b. Thrombocytopenia
- c. Haemolytic anaemia
- d. Lupus erythematosus

89. Pyritinol (pyrithioxine) is used as:

- a. Analeptic drug
- b. Cognition enhancing drug
- c. Antiepileptic drug
- d. Antidepressant drug

90. The local anaesthetic having high cardiotoxic and arrhythmogenic potential is:

- a. Lignocaine
- b. Procaine
- c. Bupivacaine
- d. Ropivacaine

91. Which sensation is blocked first by low concentrations of a local anaesthetic:

- a. Pain
- b. Temperature
- c. Touch
- d. Deep pressure

92. Concurrent use of the following drug is likely to cause failure of oral contraception

- a. Isoniazid
- b. Rifampicin
- c. Cimetidine
- d. Propranolol

93. Which of the following can act as a single dose postcoital contraceptive:

- a. Clomiphene citrate
- b. Mifepristone
- c. Danazol
- d. Medroxyprogesterone acetate

94. To be a useful inhaled glucocorticoid the drug should have:

- a. High oral bioavailability
- b. Low oral bioavailability
- c. Additional bronchodilator activity
- d. Prodrug character

95. The drug of choice for hyperkinetic children is:

- a. Methylphenidate
- b. Nikethamide
- c. Caffeine
- d. Clonazepam

96. The rare but characteristic adverse effect of HMGCoA reductase inhibitors is:

- a. Onycholysis
- b. Myopathy
- c. Alopecia
- d. Oculomucocutaneous syndrome

97. Quinidine can cause paradoxical tachycardia in a patient of:

- a. Sick sinus syndrome
- b. Atrial extrasystoles
- c. Atrial fibrillation
- d. Ventricular extrasystoles

98. Furosemide is to be preferred over hydrochlorothiazide when hypertension is accompanied by:

- a. Asthma
- b. Hyperuricaemia
- c. Diabetes
- d. Congestive heart failure

99. Use of potassium sparing diuretics in patients receiving the following drug needs close monitoring:

- a. Furosemide
- b. Hydrochlorothiazide
- c. Captopril
- d. Verapamil

100. Tranexaemic acid is a specific antidote of:

- a. Fibrinolytic drugs
- b. Organophosphates
- c. Barbiturates
- d. Heparin

Answer Key

Q. No.	Answer
1	d
2	a
3	c
4	a
5	c
6	c
7	d
8	a
9	b
10	b
11	d
12	b
13	d
14	c
15	c
16	b
17	c
18	c
19	d
20	a
21	d
22	c
23	a
24	a
25	c

Q. No.	Answer
26	b
27	c
28	d
29	a
30	b
31	b
32	c
33	c
34	d
35	a
36	c
37	b
38	b
39	d
40	a
41	c
42	b
43	a
44	b
45	d
46	b
47	d
48	d
49	d
50	d

Q. No.	Answer
51	a
52	a
53	d
54	a
55	a
56	d
57	b
58	c
59	a
60	b
61	c
62	a
63	b
64	c
65	b
66	c
67	d
68	d
69	b
70	c
71	b
72	d
73	d
74	b
75	c

Q. No.	Answer
76	c
77	c
78	a
79	a
80	c
81	c
82	b
83	c
84	a
85	d
86	b
87	c
88	d
89	b
90	c
91	a
92	b
93	b
94	b
95	a
96	b
97	c
98	d
99	c
100	a