

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
 - a. Group discussion
 - b. Online lectures
 - c. Classroom teaching
 - d. 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?
- Road trips take longer in hybrid cars.
 - It is more profitable for car manufacturers to produce hybrid cars.
 - Hybrid cars have certain lacunae compared to petrol cars
 - Gas emissions of petrol cars contribute to global warming.
19. Mr Y starts walking northwards for 1 km and then turn 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
- northwest
 - Southwest
 - Northeast
 - 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

- a. Debate
- b. Seminar
- c. Group discussion
- d. 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

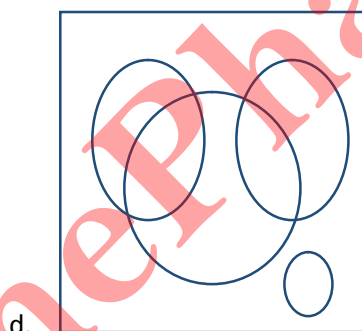
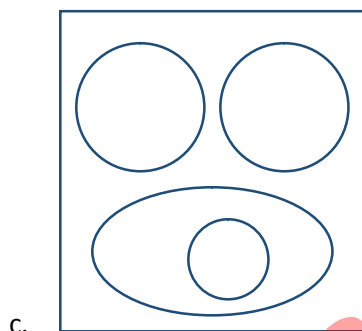
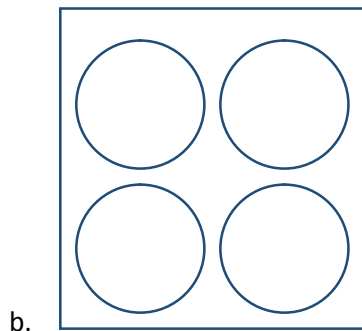
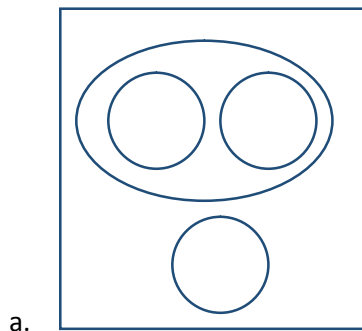
- a. Weight
- b. Age
- c. Daily food consumption
- d. Daily exercise

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

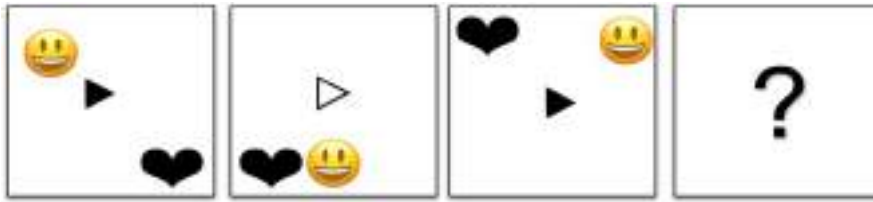
- a. Line diagram
- b. Pie chart
- c. Scatter plot
- d. Box plot

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 : ?)
- Hard disc
 - Random access memory
 - Central processing unit
 - Software
34. People are related to bus in the same way as oxygen is related to
(People : Bus :: Oxygen : ?)
- Lungs
 - Heart
 - Blood vessels
 - Red blood cells

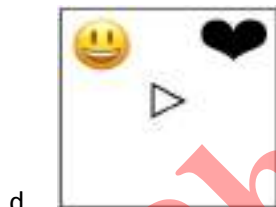
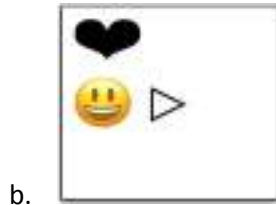
35. Which Venn diagram best describes the relationship between Earth, Venus, Sun and Planets?



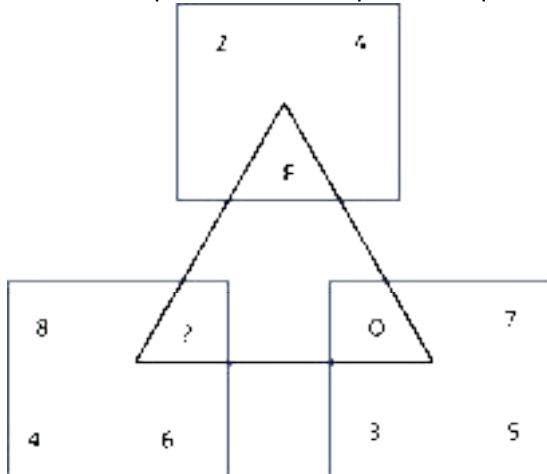
36. Carefully observe the sequences of images given below



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



37. Which alphabet should replace the question mark?



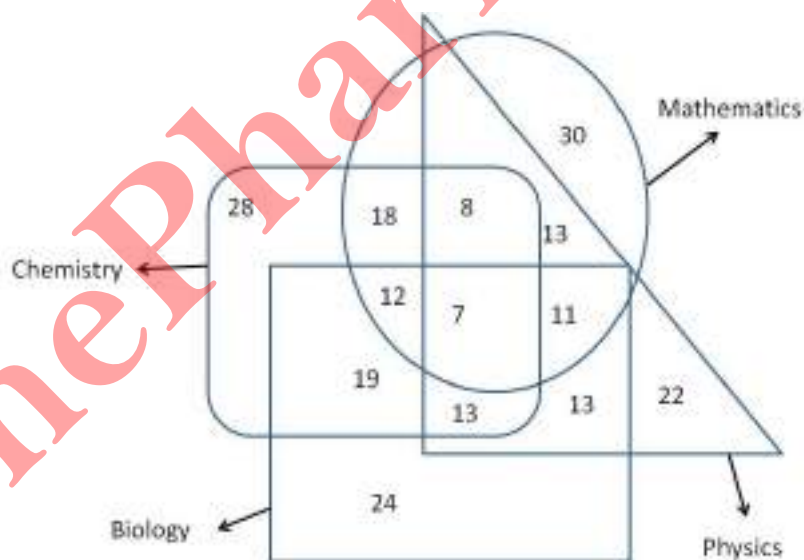
- a. X
- b. R
- c. S
- d. U

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?
- Megapixel
 - Megabytes
 - Megabits
 - Megacam
41. Which of the following is NOT used for biometrics
- Iris scan
 - Finger print
 - DNA print
 - Retinal scan
42. In comparison to classroom teaching, the definitive advantage of online teaching is
- Accuracy of information
 - Accessibility
 - Personal touch
 - 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

- a. Server
- b. Supercomputer
- c. Enterprise
- d. Network

48. All of the following are input device for a computer EXCEPT

- a. Keyboard
- b. Mouse
- c. Touch pad
- d. 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 -Pharmaceutics

51. In which of the following step, colorants are added in the process of sugar coating of tablets
- Syrup coating
 - Seal Coating
 - Finishing
 - Polishing
52. As per the regulations of good manufacturing practices the limit of solid content in water for injection is
- 0.01 PPM
 - 1 PPM
 - 10 PPM
 - 1000 PPM
53. The chemical additives that cause suspended solids to form flocs for a negatively charged drug is
- CMC
 - Aluminum chloride
 - Veegum
 - Bentonite
54. During autoclaving the microorganism are killed by one of the following mechanisms:
- Oxidation of RNA of microorganism
 - Inhibition of reproduction of the cell of the microorganism
 - Coagulation of cellular proteins of microorganism
 - Alkylation of cellular metabolites of microorganism
55. The sterilization of talc is done by which of the following methods:
- Radiation
 - Moist heat
 - Gas sterilization
 - Dry heat
56. The glidant used in tablet as excipient are following EXCEPT
- Talc
 - Corn Starch
 - Clay
 - Silica derivatives

57. Type II glass is
- Sodalime glass for oral and topical use
 - Regular soda lime glass
 - Treated soda lime glass
 - Borosilicate glass
58. All the following are reciprocating pump except
- Gear pump
 - Plunger pump
 - Diaphragm pump
 - Piston pump
59. All the following equipment are used for semi solid mixing except
- Propeller
 - Sigma blade mixer
 - Planetary mixer
 - Colloid mill
60. The schedules S under Drug and Cosmetic Act 1940 & rules 1945 regulates
- Standard for mechanical contraceptive
 - Standards for patents and proprietary medicine
 - Standards for cosmetics
 - Standard for ophthalmic preparation
61. Cellulose membrane filters utilize
- Surface filtration
 - Depth filtration
 - Vacuum filtration
 - Hot filtration
62. Working principle of Ball mill is based on
- Impact only
 - Attrition only
 - Cutting & Impact
 - Impact & Attrition
63. Abrasive and humectant compounds used in the formulation of toothpaste are
- Dicalcium phosphate and Sorbitol syrup
 - Sodium lauryl sulphate and Tragacanth
 - Dicalcium phosphate and Sodium lauryl sulphate
 - Tragacanth and Sorbitol syrup

64. If the Carr's index of a powder is 16% then the type of powder flow is
- Poor
 - Excellent
 - Very poor
 - Good
65. One of the following apparatus is used to determine the particle size by the gravity sedimentation method
- Pycnometer
 - Ostwald viscometer
 - Andreasen apparatus
 - Friabilator
66. In cosmetic preparations, an antioxidant used in an aqueous system is
- Sodium formaldehyde sulphonylate
 - α - Tocopherol
 - Methyl paraben
 - Phenol
67. The instrument used to measure particle volume
- Coulter Counter
 - Microscope
 - Hempel Burette
 - Helium Densitometer
68. Nephelometric measurements are most sensitive for
- Clear solution
 - Concentrated solution
 - Thick suspensions
 - Very dilute suspensions
69. Most appropriate mechanism by which suspending agents act is:
- Reducing interfacial tension
 - Increasing zeta potential
 - Increasing viscosity
 - Decreasing viscosity
70. The ratio of the void volume to the bulk volume of the powder is called as
- Porosity
 - True density
 - Granular density
 - Bulk density

71. The phenomena of reformation of gel by applying gentle rolling or rocking motion is called
- Thixotropy
 - Rheopexy
 - Dilatancy
 - Negative Thixotropy
72. Bio- Gel is
- Dextrin
 - Agarose
 - Polyacrylamide
 - Cabopol
73. Which of the following flow system shows yield value?
- Plastic
 - Pseudoplastic
 - Pilettante
 - Newtonian
74. Bingham materials exhibit
- Newtonian flow
 - Plastic flow
 - Pseudo plastic flow
 - Dilatant flow
75. For mixing of cohesive solids which of the following mixer is used
- Double cone mixer
 - Sigma blade mixer
 - Fluidized mixer
 - None of above
76. Choose the correct semi rigid gel used for exclusion chromatography
- Sephadex
 - Gelatin
 - Cellulose
 - Alumina
77. The phenomenon of increasing the solubility of weak electrolytes and non-polar molecules by the addition of a water miscible solvent in which the drug has good solubility is called
- Complexation
 - Cosolvency
 - Solubilization
 - Hydrotropy

78. The protective effect of a colloid is expressed in terms of
- Schulze-hardy score
 - Gold number
 - Lyotropic series number
 - Sedimentation volume
79. The property of non-Newtonian fluids of becoming less viscous when subjected to an applied stress, is known as
- Thixotropy
 - Rheopexy
 - Dilatancy
 - Plasticity
80. All of the following are classified as colligative properties except
- Elevation in Boiling point
 - Depression in Freezing point
 - Osmotic pressure
 - Conductivity
81. Texture of vanishing creams depends on the amount of
- Palmitic acid
 - Surfactants
 - Stearic acid & alkali
 - Alkali
82. An oil-in-water emulsion is stabilized with sodium stearate; upon addition of calcium chloride leads to formation of water-in-oil emulsion; the phenomenon is known as
- Breaking of emulsion
 - Creaming of emulsion
 - Phase inversion
 - Coalescence
83. All of the following can be present in shampoos except
- Sodium lauryl sulphate
 - Disodium edetate
 - Stearic acid
 - Tetrabromo fluorescein
84. The unit of viscosity is
- g/cm.sec
 - g.sec/cm
 - g.cm/sec
 - g/sec

85. Magnesia magma is an example of
- Plastic flow
 - Pseudo plastic flow
 - Dilatant flow
 - Newtonian flow
86. Consistency of oral emulsion is measured by
- Cup and Bob viscometer
 - Penetrometer
 - Brook field viscometer
 - Capillary viscometer
87. Sigma blade mixer is commonly used in
- Wet granulation
 - Dry granulation
 - Powder mixing
 - Crude fiber mixing
88. Rate of drug bioavailability is most rapid in
- Controlled released products
 - Tablets
 - Hard gelatin capsules
 - Solutions
89. In tablet formulation, polyvinylpyrrolidone is commonly used as
- Diluent
 - Glidant
 - Lubricant
 - Binder
90. Aerosol can withstand the pressure of
- 140-180 psig at 130 °F
 - 140-180 psig at 180 °F
 - 220-240 psig at 130 °F
 - 220-240 psig at 180 °F
91. On commercial scale, emulsions are prepared by
- Hydrolysis
 - Dialysis
 - Homogenization
 - Centrifugation

92. During the process of tablet manufacturing, plating of punch is done by
- Chromium
 - Aluminium
 - Iron
 - Zinc
93. Moisture content of wet solid is measured by
- Weight of water in sample/ weight of dry sample X 100
 - Weight of drug in sample/ weight of dry sample X 100
 - Weight of dry sample/ weight of glycerine added X 100
 - Weight of glycerine added/ weight of active constituent X 100
94. Preparation of spirits involves
- Macerating and Distillation
 - Distillation and Fermentation
 - Macerating and Fermentation
 - None of the above
95. Syrup IP contains _____ solution of sucrose
- 85% w/w
 - 90% w/w
 - 66.7% w/w
 - 57.1% v/v
96. Turbo-tray dryer is a
- Static bed dryer
 - Moving bed dryer
 - Fluidized bed dryer
 - Pneumatic dryer
97. Moisture content of empty hard gelatin capsule should lie in the range of
- 0 – 5%
 - 5 – 10%
 - 13 – 16%
 - 25 – 30%

98. The primary objective of a Phase-1 clinical trial is to determine
- Efficacy
 - Toxicity
 - Safety
 - Commercial use
99. The absorption of an ophthalmic drug does not depend on which of the following?
- Physicochemical properties of drug
 - Drainage of tears
 - Output of tears
 - Size of the eyeball
100. Sustained Release tablet should follow _____ order of kinetics
- First
 - Pseudo-first
 - Zero
 - Second

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	b
52	c
53	b
54	c
55	d
56	c
57	c
58	a
59	a
60	c
61	b
62	d
63	a
64	d
65	c
66	a
67	a
68	d
69	a
70	a
71	b
72	c
73	d
74	b
75	b

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