

Solutions

1. Ans: D
Solution: Teaching is the profession of a teacher who helps students to acquire values, knowledge or competencies and helps students to enhance their learning through the teaching process. It can be best when a teacher has sufficient knowledge of his/her subjects, good communication skills and has competence in managing or monitoring the classroom activities. So, from the above-given options, D is correct.
2. Ans: C
Solution: Teaching aids are the aids used by the facilitator or a teacher in the classroom to make his teaching effective and easy so that the students can be understood easily. It also helps the students to optimize the learning outcomes. Therefore, the correct option is C.
3. Ans: B
Solution: The purpose of higher education is to promote critical and creative thinking abilities among students so that they can become self-dependent. These abilities will help them to think independently, develops creativity and also ensure job placements. Therefore, both the statements are correct, but the only reason is not the correct explanation of assertion. So, option B is correct.
4. Ans: A
Solution: Formative assessment assist the students during the learning process. It includes quizzes, discussions etc. Summative assessment evaluates learning of the students at the end of an instructional unit. It is used to grade the final learning outcomes. Continuous and comprehensive evaluation evaluate cognitive and co-cognitive aspects with regularity and also evaluates every aspect of the student during their presence at the college/school. Norm and criterion referenced tests evaluate interpretations based on a group and certain yardsticks. Hence the correct option is A.
5. Ans: D
Solution: To explore the effect of possible factors for the organization of effective mid-day meal interventions, ex-post-facto method is the most appropriate. This study allows the comparative study of mid-day meal. This research which is also known as after-the-fact research is an investigation that starts after the fact has occurred without interference from the researcher.
6. Ans: B
Solution: Formulating a research question is an initial mandatory requirement for pursuing research. A research problem is the first step of every research. The issue related to the particular topic is addressed as the foremost step for pursuing research.
7. Ans: C
Solution: The format of thesis writing is the same as in a research dissertation. The aim of the dissertation or thesis is to produce original piece of work on a clearly defined topic.
8. Ans: C
Solution: The design of any research is defined by the topic and paradigm. In qualitative research paradigm, Data collection with bottom-up empirical evidences is considered as a critical feature.
9. Ans: C
Solution: Research Ethics is the analysis of the ethical issues which are reported by the people or researchers involved in that research of the particular topic. These ethics are influenced by negative implications that includes the studies are cited without proper references, conduct of practitioner that is screened in terms of reported research evidences, both policy making and policy implementing processes are regulated in terms of preliminary studies.
10. Ans: B
Solution: In a research on the effect of child-rearing practices on stress-proneness of children in completing school projects, the hypothesis formulated is that 'child rearing practices do influence stress-proneness'. At the data-analysis stage a null hypothesis is advanced to find out the tenability of research hypothesis. On the basis of the evidence available, the null hypothesis is rejected at 0.01 level of significance. In this case research hypothesis will be accepted.
11. Ans: B
Solution: According to the first sentence of the passage, "In terms of labour, **for decades** the relatively low cost and high quality of Japanese workers conferred considerable **competitive advantage across numerous durable goods and consumer electronics industries** (e.g. Machinery, **automobiles**, televisions, radios)." This clearly states that the automobile industry was one of those countries which enjoyed competitive advantages in automobile industry for decades. Thus, option B is the correct answer.
12. Ans: C
Solution: According to the second paragraph of the passage, "However, as educational levels and technical skills continue to rise in other countries, India, Singapore, and like nations enjoying labour-based competitive advantage today are likely to find such advantage cannot be sustained through emergence of new competitors." This segment states that since the competitors in the technical field are growing, the labour-based competitive advantages of India and Singapore cannot be sustained in IT and service sectors. Thus, option C is the correct answer.

13. Ans: D
Solution: According to the second last paragraph of the passage, "Only if an organization is able to **combine, integrate and apply its resources (e.g. Land, labour, capital, IT) in an effective manner** that is not readily imitable by competitors can such an organization enjoy competitive advantage sustainable overtime." This sentence means that if the resources are efficiently used by organizations, in a way which is not harnessed by the competitors, they can enjoy competitive advantage overtime.
14. Ans: C
Solution: According to the second last paragraph of the passage, "An organization with superior knowledge **can achieve competitive advantage in markets that appreciate the application of such knowledge.**" Hence, to ensure competitive advantages in specific markets, superior knowledge is required.
15. Ans: A
Solution: The first paragraph of the given passage discusses the considerable competitive labour-based advantage Japan has. It also states this advantage is now being taken by several other countries like India and Singapore. The second paragraph goes on to discuss the international capital flows. Thus, option A is the correct answer and the other options have not been dealt with in the passage.
16. Ans: D
Solution: According to the last paragraph of the passage, "An organization with superior knowledge can achieve competitive advantage in markets that appreciate the application of such knowledge. It further goes on to lay stress on the Knowledge-driven competitive advantage. Thus, option D is the correct answer.
17. Ans: A
Solution: Horizontal communication means communication among people at same level. It is best suited in an educational institution where people are of equal status.
18. Ans: B
Solution: Out of the given options, voice modulation plays an important while delivering the lectures. The voice modulation helps the students to understand the seriousness of that particular question or topic. So, voice modulation is an essential element a teacher has to take cognizance of while addressing students in a classroom.
19. Ans: A
Solution: Moralizing, being judgmental and comments of consolation are the restrictions or barriers to effective communication as these create hindrances in the communication. Rest all options such as summary, self-review, use of simple words, eye contact help in making the communication more effective.
20. Ans: A

Solution: The choice of communication partners is influenced by various factors - Proximity, utility, loneliness. Proximity means sense of closeness/connection to the partner. Utility means seeking benefit out of communication and loneliness means the person is alone and he needs to talk to some other person. Therefore, these factors play important role in influencing choice of communication partner.

21. Ans: C
Solution: As a teacher, it's his/her duty to help the learner to acquire knowledge and enhance their learning. For making the teaching process more effective, the teacher should adopt different teaching techniques according to the learner and also adopt well-established posture.
22. Ans: B
Solution: Every communicator has to experience the anticipatory excitement. Anticipatory excitement describes the feeling when something is coming what one feels can happen. In anticipatory communication, the procedure is set to identify some areas of interest an individual/group will be interested in discussing based upon the common expected interests. Therefore, every communicator has to experience anticipatory excitement.
23. Ans: A
Solution:
SELECTION is coded as QCJCARGML
 $\rightarrow S - 2 = Q$
 $\rightarrow E - 2 = C$
 $\rightarrow L - 2 = J$
 $\rightarrow E - 2 = C$
 $\rightarrow C - 2 = A$
 $\rightarrow T - 2 = R$
 $\rightarrow I - 2 = G$
 $\rightarrow O - 2 = M$
 $\rightarrow N - 2 = L$

Similarly,

- $\rightarrow A - 2 = Y$
 $\rightarrow M - 2 = K$
 $\rightarrow E - 2 = C$
 $\rightarrow R - 2 = P$
 $\rightarrow I - 2 = G$
 $\rightarrow C - 2 = A$
 $\rightarrow A - 2 = Y$
 $\rightarrow N - 2 = L$
 $\rightarrow S - 2 = Q$

Hence, AMERICANS will be coded as "YKCPGAYLQ".

24. Ans: C

Solution:

The pattern followed here is,

- $\rightarrow 3 + 8 = 11$
 $\rightarrow 11 + 12 = 23$
 $\rightarrow 23 + 16 = 39$
 $\rightarrow 39 + 20 = 59$
 $\rightarrow 59 + 24 = 83$

Hence, "83" is the missing term.

25. Ans: D
 Solution: Two railway tickets from city A to B and three tickets from city A to C cost ₹ 177.
 Three tickets from city A to B and two tickets from city A to C cost ₹ 173.
Let M: Ticket A to B
N: Ticket from A to C
 $2M + 3N = 177$ (eq1)
 $3M + 2N = 173$ (eq2)

By multiplying,
 $eq1 \times 3 - eq2 \times 2$

$$\begin{aligned} 6M + 9N &= 531 \\ 6M + 4N &= 346 \end{aligned}$$

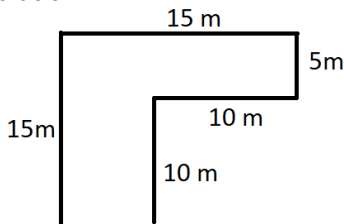
$$\begin{aligned} \Rightarrow 6M + 9N - 6M - 4N &= 531 - 346 = 185 \\ \Rightarrow 5N &= 185 \\ \Rightarrow N &= 37 \end{aligned}$$

On putting N value in eq1,

$$\begin{aligned} \Rightarrow 2M + 3 \times 37 &= 177 \\ \Rightarrow 2M &= 177 - 111 = 66 \\ \Rightarrow M &= 33 \end{aligned}$$

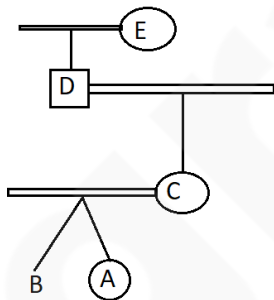
Hence, the fare for city B from A will be 33.

26. Ans: D
 Solution:



Hence, he is 5 m from his starting point.

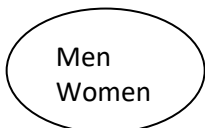
27. Ans: A
 Solution:



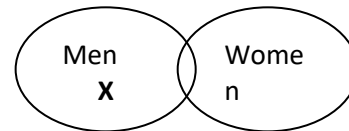
A is granddaughter of G.

28. Ans: C
 Solution: The pattern followed here is:
 The first term = AB, then the next term = CDE,
 reversing it we get, EDC,
 then the next term is FGHI,
 after this next term = JKLMN, reversing it we
 get, NMLKJ,
 then the next term is OPQRST.

29. Ans: D
 Solution:
From 1,



From 3,

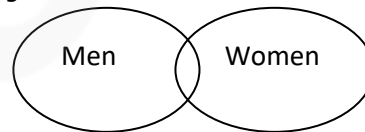


Both these statements are denial i.e. opposite of each other.

30. Ans: B
 Solution: Since the given proposition '**All thieves are poor**' is false. Hence, the true statement will be some thieves are not poor. As, when 'all' statement is true, 'some not' is false and vice versa.

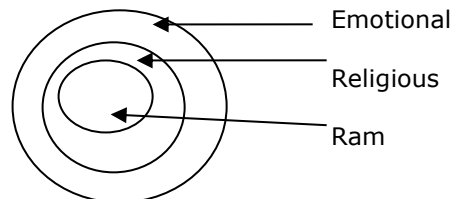
31. Ans: D
 Solution: Here, we have given a comparison between one thing and other. Infinite space: Earth:: Millet Field: One grain. Infinite space has been compared to Millet field and Earth has been compared to a single grain. So, the nature of argument is Analogical.

32. Ans: C
 Solution: Venn Diagram gives a valid representation of propositions. Option A, B and D are correct but option C is incorrect as Venn diagram has to be valid. For e.g.



33. Ans: B
 Solution: Option B is not correct as an argument with two true premises and a false conclusion may be invalid because if the premises are true, then conclusion drawn from the above premises must be true as well. Otherwise, it is invalid.

34. Ans: C
 Solution: According to the given information,



All religious are emotional but all emotional are not religious. So, conclusion 2 is false. Some religious persons are not emotional, it also not true.

Conclusions (A) and (C) are true.

35. Ans: B
 Solution:
 In 2012, A's profit% = 35%
 $\frac{\text{income}}{\text{expenditure}} \text{ ratio} = \frac{135}{100} \dots (1)$

For company B, profit = 40%
 $\frac{\text{income}}{\text{expenditure}} \text{ ratio} = \frac{140}{100} \dots (2)$

Expenditure of company A: B=2:1
 Let expenditure of company B=100x
 Income of company B will be= 140x
 Expenditure of company A=200x
 Income of company A=270x
 Total expenditure of A & B= 9 Lakh
 So, $200x+100x = 9$
 $300x = 9$
 $x = \frac{3}{100}$
 So, income of company A= $270x = 270 \times \frac{3}{100} =$

8.1 Lakh

36. Ans: C
 Solution: Average profit (%) of five years for B = $(30+40+35+50+35)/5 = \mathbf{38\%}$
37. Ans: B
 Solution: In year 2013, the percentage profit earned by the company B is less than that of company A. By simply taking the values from the table, percentage profit earned by the company A = 45% and percentage profit earned by the company B = 35%.
38. Ans: C
 Solution:
 Total aged people = $(6+7+6+1+2+9+2) + (4+5+12+4+11+15+4+2) + (17+5+14+11+15+4+2) = 134$
 Number of People Aged between 21-30 = $(4+5+12+4+11+15+4+2) = 33$
 So, required % = $\frac{33}{134} \times 100 = \mathbf{25\%(\text{approx.})}$
39. Ans: D
 Solution: Total number = 134
 Number of people in Hip-hop = $(9+3+4) = 16$
 Required % = $\frac{16}{134} \times 100 = \mathbf{12\%(\text{approx.})}$
40. Ans: C
 Solution: People aged 31+ = $(17+5+14+11+15+4+2) = 68$
 People other than Classical music = $68-17=51$
 So, required % = $\frac{51}{68} \times 100 = \mathbf{75\%}$
41. Ans: A
 Solution: Information Technology is the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware.
42. Ans: A
 Solution:
 Binary equivalent of 48:

2	48	
2	24	0
2	12	0
2	6	0
2	3	0
2	1	1
	0	1

Binary equivalent of 51:

2	51	
2	25	1
2	12	1
2	6	0
2	3	0
2	1	1
	0	1

So, option A is the correct answer.

43. Ans: A
 Solution: The process of copying files to a CD-ROM is known as Burning. Burning means to transferring or sending the files or content to a CD-ROM.
44. Ans: D
 Solution: An unsolicited e-mail message sent to many recipients at once is Spam. These types of e-mail messages are sent by botnets or virus infected computers.
45. Ans: C
 Solution: Read Only Memory, that is also known as non-volatile memory, is the type of memory that holds the computer's start-up routine. Read only memory (ROM), by its name means that the information can only be read but we cannot write on it. The information is stored permanently on this memory.
46. Ans: A
 Solution: ASCII stands for American Standard Code for Information Interchange.
 An ASCII is a character-encoding scheme that is employed by personal computers in order to represent various characters, numbers and control keys that the computer user selects on the keyboard.
47. Ans: C
 Solution: Surface ozone is the air pollutant in urban areas which irritates eyes and also respiratory tract of human beings. Surface ozone is formed when nitrogen oxides, carbon monoxide react in the atmosphere in the presence of sunlight.
48. Ans: A
 Solution: Untreated sewage is the largest source of water pollution in major rivers of India. Untreated sewage also poses a lot of diseases.
49. Ans: B
 Solution: Sustainable development goals have specific targets to be achieved by the year 2030. The Sustainable development goals cover some of the important issues like poverty, health, education, water sanitation etc.

50. Ans: D

Solution: Indian government's target of producing power from biomass by the year 2022, is 10GW.

51. Ans: B

Solution: Soil Conservation is the prevention of soil loss from erosion which are caused by excessive usage, sometimes total desertification. Thus, conserving is very critical for human survival.

Soil is home to many micro-organisms and contains minerals. This R statement is also true but the (R) does not explain in any sense that soil conservation is important for human survival. Therefore, both (A) and (R) are correct but (R) is not the correct explanation of (A).

52. Ans: B

Solution: World Meteorological Organization's (WMO) objective has been to reduce the number of deaths due to hydrometeorological disasters over the decade 2010-2019 by (with reference to the decade 1994-2003) 50%.

53. Ans: B

Solution: The five core values among the institutions of higher education promoted by the NAAC are:

- i. Contributing to national development.
- ii. Fostering global competencies among the students.
- iii. Inculcating a value system among students and teachers.
- iv. Promoting the use of technology.
- v. Quest for excellence.

Therefore, amongst the given options, only 1,2 and 3 are correct.

54. Ans: D

Solution: Value Education is the process by which people (in higher institutes, the teacher) gives values to the students/others. Mentoring or reflective session on values is the best way for providing value education.

55. Ans: A

Solution: The Supreme Court of India has declared National Judicial Appointments Commission (NJAC) as unconstitutional on 16th October, 2015.

56. Ans: D

Solution: Our Constitution declared Supreme Court as the guardian of the constitution. President is head of the state but Prime Minister is the head of the Government. The Directive Principles are non-justiciable in nature because they are not legally enforceable by the courts for their violation.

57. Ans: A

Solution: The fundamental duties of citizen were added to the Constitution by the 42nd Amendment in 1976 are:

- To respect the National Flag
- To protect and improve the natural environment.
- For a parent to provide opportunities for education to his/her child.

58. Ans: C

Solution:

- NITI Aayog or the National Institutions for Transforming India is neither a constitutional body (deriving powers, functions from constitution) nor a statutory body passed through act of parliament)
- NITI Aayog has never been passed as an act of Parliament nor it has been mentioned anywhere in the Constitution thus it's definitely neither statutory nor a constitutional body.
- NITI Aayog is being seen as a think-tank that will foster cooperative federalism rather than take a top down approach.

59. Ans: C

Solution: Memory level is a thoughtless and first level of teaching. It is concerned with mental ability or memory. It records the important points made during the presentations. An understanding level helps to grasp the opinion, to perceives and comprehend the meaning. Also gives an opportunity for discriminating examples and non-examples of a point. Reflective level includes deep thinking about something. It involves critically analysing the points to be made and discussed.

Hence the correct option is C.

60. Ans: B

Solution: The following characteristics may be considered helpful in designing effective teaching-learning systems are the previous experience of the learners in respect of the particular topic. If the prior experience or knowledge consistent with the new information, then the effect on learning is influential and positive. Student's language background also plays an effective role in teaching-learning process. It helps the teacher to whether to work on this issue or not. The other learner characteristic is the motivational-orientation of the students.