

## **IITM TERM FINAL EXAM POD21TEANQPA**

### **Notations :**

- 1.Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with ✗ icon are incorrect.

**Question Paper Name :**

IITM TERM FINAL EXAM POD21TEANQPA

22 Aug 2021

**Total Marks :**

200

## **Sem1 Maths1**

**Number of Questions :**

16

**Section Marks :**

50

**Question Number : 1 Question Type : MCQ**

**Correct Marks : 0**

Question Label : Multiple Choice Question

### Instructions:

- There are some questions which have functions with discrete valued domains (such as day, month, year etc). For simplicity, we treat them as continuous functions.
- Notations:
  - $\mathbb{R}$  = Set of real numbers
  - $\mathbb{N}$  = Set of natural numbers
- The set of natural numbers includes 0.
- Standard acronyms:
  - *ft* - feet

**Options :**

A. ✓ Useful Data has been mentioned above.

B. ✗ This data attachment is just for a reference & not for an evaluation.

**Question Number : 2 Question Type : MCQ**

**Correct Marks : 3**

Question Label : Multiple Choice Question

Let the curve  $C_f$  represented by a polynomial  $f(x)$  of degree three passes through the points  $(-5, 0)$  and  $(2, 0)$ . Curve  $C_f$  intersects curves represented by the polynomials  $g(x) = p(x - 3)(x - 5)(x - 9)$ ,  $h(x) = q(x - 2)(x - 5)(x - 7)$  and  $X$ -axis at point  $A$ , where  $p, q \in \mathbb{N} \setminus \{0\}$ . If the curve  $C_f$  also intersects another curve represented by the polynomial  $P(x)$  at points  $B \equiv (7, 240)$  and  $C \equiv (6, a)$ , then the distance between points  $C$  and  $D \equiv (6, 0)$  is

**Options :**

A. ✗ 360

B. ✓ 88

C. ✗ 140

D. ✗ 468

**Question Number : 3 Question Type : MCQ****Correct Marks : 3**

Question Label : Multiple Choice Question

An advertising video is marked as an excellent video when it has a tendency (probability) of getting liked by atleast 20% of users when they watch it. An experiment shows that tendency ( $T(n)$ ) of getting likes for a video depends on the number of viewers ( $n$  in million) as

$$T(n) = \frac{1}{1 + e^{-n}} - 0.5$$

If the video was marked as excellent video when at least  $k$  million users view it, then choose the correct option.

**Options :**

A. ✖  $k = \ln\left(\frac{10}{4}\right)$

B. ✖  $k = \ln\left(\frac{3}{7}\right)$

C. ✔  $k = \ln\left(\frac{7}{3}\right)$

D. ✖  $k = \ln\left(\frac{10}{6}\right)$

**Question Number : 4 Question Type : MCQ****Correct Marks : 3**

Question Label : Multiple Choice Question

Polynomial fit for the data given in the table recorded by a student is

$$y = f(x) = e^{x(x^2-1)(x^2-4)} + c - 1$$

Choose the value of  $c$ , so that SSE (sum squared error) will be minimum?

$x$	-2	-1	0	1	2
$y$	1	0	-1	1	0

**Options :**

A. ✔  $c = 0.2$

B. ✖  $c = 0.5$

C. ✖  $c = 1$

D. ✖  $c = 0.4$

**Question Number : 5 Question Type : MCQ**

**Correct Marks : 3**

Question Label : Multiple Choice Question

Let  $f(x)$  and  $g(x)$  be two functions defined from  $\mathbb{R}$  to  $\mathbb{R}$  such that

$$f(x) = \begin{cases} 1 & \text{if } x \text{ is rational} \\ 4 & \text{if } x \text{ is irrational} \end{cases}$$

$$g(x) = \begin{cases} 5 & \text{if } x \text{ is rational} \\ 6 & \text{if } x \text{ is irrational} \end{cases}$$

The value of  $(f \circ g)(e) + (g \circ f)(\pi)$  is

**Options :**

A. ✖ 4

B. ✖ 8

C. ✖ 2

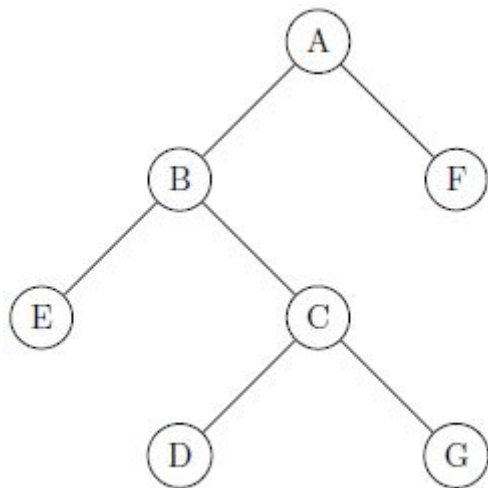
D. ✔ 6

**Question Number : 6 Question Type : MCQ**

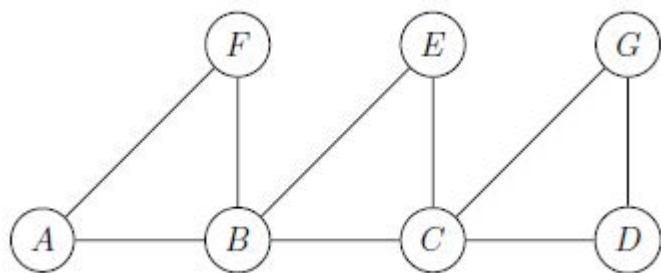
**Correct Marks : 3**

Question Label : Multiple Choice Question

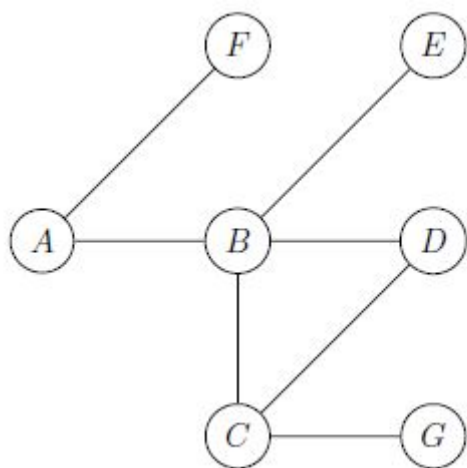
The DFS (Depth First Search) tree of a graph that starts with vertex  $A$  is shown below. Choose the option which might be the original graph.



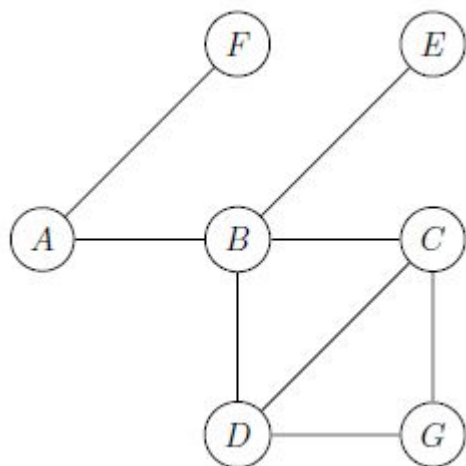
Options :



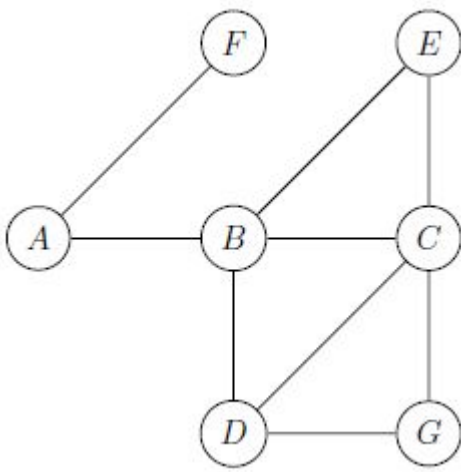
A. ✖



B. ✔



C. ✖



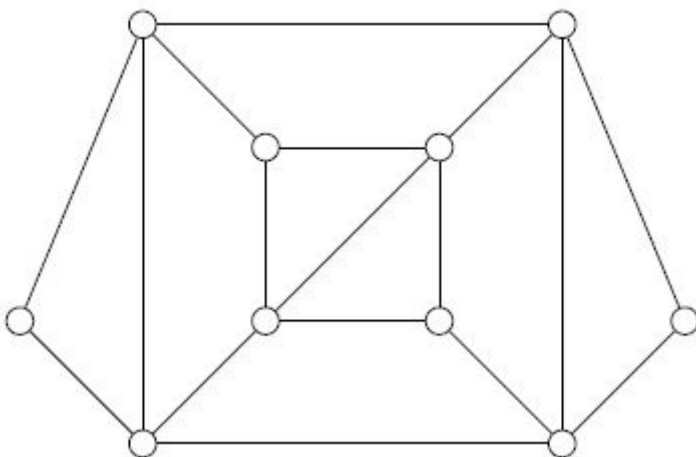
D. ✖

**Question Number : 7 Question Type : MSQ**

**Correct Marks : 4**

Question Label : Multiple Select Question

Employees of the IITM Online Degree Program are assigned to visit the exam centers in Chennai. Vidya has been asked to arrange cabs for these employees to drop them at the centers. She has created a graph (shown below) and asked Sanaya to arrange the minimum number of cabs, but has forgotten to tell Sanaya what the nodes and the edges represent. Sanaya has assumed the following cases and found the answers accordingly.



**Cases:**

**Case 1:** Nodes represent the locations of employees and edges represent the roads connecting these locations. Each cab can pick up employees from only one location. Sanaya needs to arrange the minimum number of cabs under the assumption that each employee is willing to walk at most

one road length from their current location to a neighboring location to be picked up.

**Case 2:** Nodes represent the employees and if two employees share an edge, then they are assigned different centers. Now, Sanaya needs to arrange the minimum number of cabs such that no two employees assigned for different centers should come in the same cab. (Assume that any number of employees can come in a cab.)

Choose the correct option(s).

**Options :**

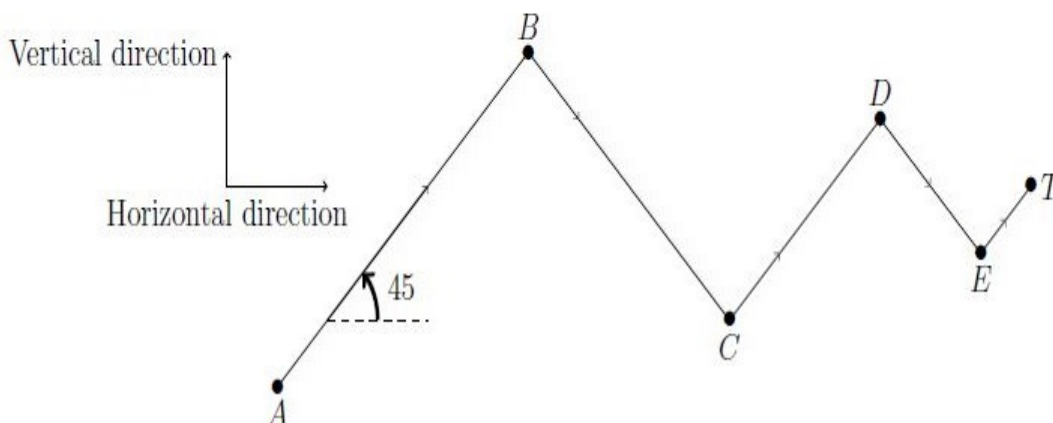
- A. ✖ Case 1 would be solved by finding the maximum number of elements in independent set.
- B. ✖ According to case 1, the minimum number of cabs required would be 2.
- C. ✔ According to case 2, the minimum number of cabs required would be 3.
- D. ✖ Case 2 would be solved by finding the minimum number of elements in vertex cover set.

**Question Number : 8 Question Type : MCQ**

**Correct Marks : 4**

**Question Label : Multiple Choice Question**

A laser beam starts from point  $A$  and reach till the point  $T$  indirectly via four reflectors  $B, C, D$ , and  $E$ . The reflectors are placed in such a way that whenever the beam hits a reflector gets reflected perpendicularly with respect to its arrival direction to the reflector. Reflector  $C$  and  $E$  are kept at a horizontal distance of 4 and 7 unit away from  $A$  respectively. Reflector  $C$  and  $E$  are kept at a vertical distance of 2 and 3 unit away from  $A$  respectively. The horizontal distance of  $T$  from  $A$  is 8 unit and the beam starts at an angle of  $45^\circ$  with respect to horizontal from  $A$ . Given  $\tan 45^\circ = 1$ , then the vertical distance of  $T$  from  $A$  would be (Assume all points  $A, B, C, D, E$ , and  $T$  are in same plane and neglect other resistance.)



Note that the figure is not for scale purpose.



Options :

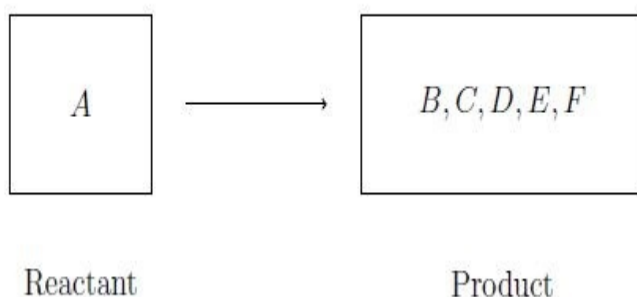
- A. ✖ 10
- B. ✖ 8
- C. ✔ 4
- D. ✖ 2

Question Number : 9 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

A chemical substance  $A$  gets converted into five chemical products  $B, C, D, E$ , and  $F$  respectively, during a chemical reaction in a vessel. The mass (in grams) of chemicals depend on the reaction time  $t$  as  $M_A(t) = -t^4 + 81$ ,  $M_B(t) = t^2 + t$ ,  $M_C(t) = t^2 + t$ ,  $M_D(t) = t^2 + t$ , and  $M_E(t) = t^2 + 2t$  for  $A, B, C, D$ , and  $E$  respectively. According to law of mass conservation, mass neither can be created nor can be destroyed, only can be converted from one form to other (which means the total mass of reactant and product should be same). If reaction is not reversible at any point of time, then the mass of product  $F$  at the time when the reaction ends (i.e., there is no reactant in the vessel) would be



Options :

- A. ✔ 30 grams
- B. ✖ 31 grams
- C. ✖ 32 grams
- D. ✖ 33 grams

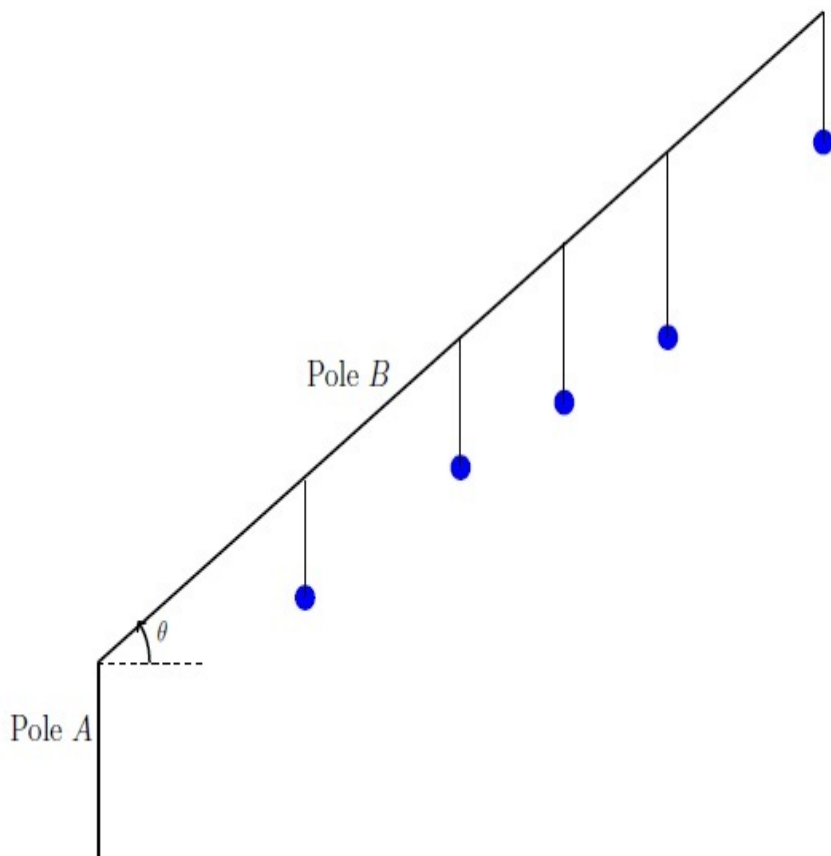
Question Number : 10 Question Type : SA

Correct Marks : 5

Question Label : Short Answer Question



In a function, five bulbs are supposed to be kept in hanging position with the help of two straight poles and five aluminum chains as shown in figure. Pole  $B$  is fixed with pole  $A$  at an angle of  $\theta$  with respect to horizontal, where  $\tan \theta = 1$ . The bulbs are at  $2ft, 5ft, 7ft, 9ft$ , and  $12ft$  away from the pole  $A$  respectively. The bulbs are at a height of  $6ft, 9ft, 11ft, 13ft$ , and  $16ft$  from the ground respectively. Find the length of pole  $A$  (in  $ft$ ) such that the total length of chains required would be minimum but every chains should atleast be of  $2ft$ . Assume that the poles, bulbs, and chains are in the same plane. (Note that figure is not for scale purpose.)



**NOTE:** Enter your answer to the nearest integer.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

6

**Question Number :** 11 **Question Type :** SA

**Correct Marks : 5**

**Question Label : Short Answer Question**

A company has branches in each of six cities  $C_1, C_2, \dots, C_6$ . Let a relation  $R$  is defined as

1.  $R = \{(a, b, c) \mid \text{there is a direct flight between } a \text{ and } b, a \neq b, \text{ with a fare of ₹ } c\}$
2. If  $(a, b, c) \in R$ , then  $(b, a, c) \in R$

An employee of that company wanted to travel from the city  $C_2$  to the city  $C_4$ . If he traveled by the cheapest route possible, then find the total fare, he should pay. Given that in relation  $R$ ,

1.  $(C_1, C_2, 4000), (C_1, C_5, 5000), (C_1, C_6, 6000) \in R$
2.  $(C_2, C_3, 5000) \in R$
3.  $(C_3, C_4, 7000) \in R$
4.  $(C_4, C_5, 4000) \in R$
5.  $(C_5, C_6, 6000) \in R$

**NOTE:** Enter your answer to the nearest integer.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

12000

**Question Number : 12 Question Type : MSQ**

**Correct Marks : 3**

**Question Label : Multiple Select Question**

Srikanth has recently got married and he wants to maintain his monthly expenses. He has recorded his monthly expenses  $E(n)$  (in thousands of ₹) for last year as

$$E(n) = \left(\frac{n^2}{1000}\right)(n^3 - 16n^2 + 55n) + 20, \text{ where } n \text{ is the number of month and } n \in \{1, 2, \dots, 11, 12\}.$$

He came to know that he should keep his monthly expense ₹20,000 per month for fulfilling his other plans. let  $N_1$  be the set of month numbers when he has spent more than ₹20,000,  $N_{-1}$  be the set of month numbers when he has spent less than ₹20,000, and  $N_0$  be the set of month numbers when he has spent ₹20,000. Assuming last year expenses as the benchmark for his expenses, choose the set of correct options.

**Options :**

A. ✖ Cardinality of  $N_1$  is 2.

B. ✔ Cardinality of  $N_{-1}$  is 5.

C. ✔ Cardinality of  $N_0$  is 2.

D. ✔ Based on the cardinalities of  $N_1$  and  $N_{-1}$  only, we can not prove that Srikanth has spent on average ₹20,000 per month last year.

E. ✖ As cardinality of  $N_1$  is less than  $N_{-1}$ , gives a proof that Srikanth has spent on average less than ₹20,000 per month last year.

**Question Number : 13 Question Type : MSQ**

**Correct Marks : 3**

**Question Label : Multiple Select Question**

Given polynomials  $f(x) = x^3 - 6x^2 + 3x$  and  $g(x) = -f(x)$ . Let  $C_f$  and  $C_g$  be the curves represented by the functions  $f(x)$  and  $g(x)$  then choose the set of correct options regarding  $f(x)$ .

**Options :**

A. ✖ Curve  $C_g$  has two turning points and the  $y$ -coordinates of both the turning points are positive.

B. ✔ Curve  $C_f$  has two turning points and  $y$ -coordinate of one turning point is positive while for other is negative.

C. ✖ Curve  $C_f$  has two turning points and the  $x$ -coordinates of both the turning points are negative.

D. ✔ Curve  $C_g$  has two turning points and the  $x$ -coordinates of both the turning points are positive.

**Question Number : 14 Question Type : MCQ**

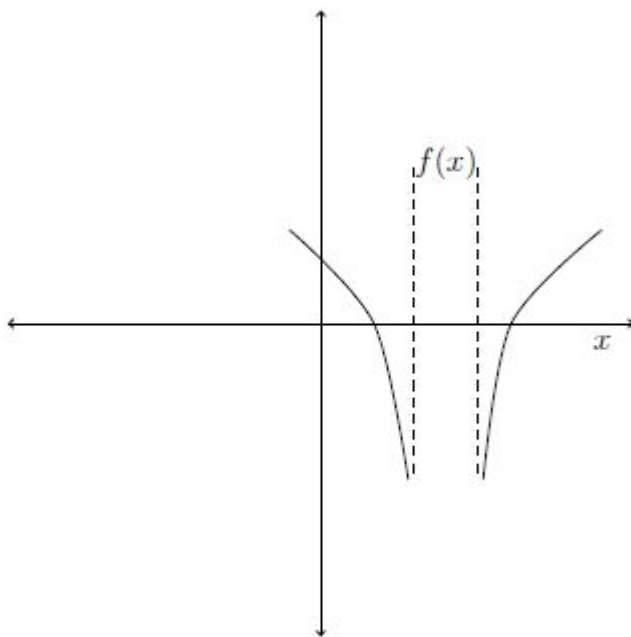
**Correct Marks : 2**

Question Label : Multiple Choice Question

Choose the option which has the most possible representation of function

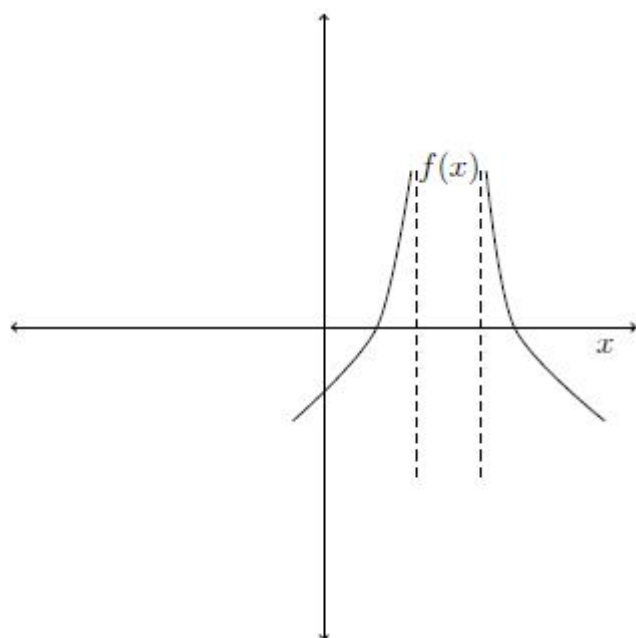
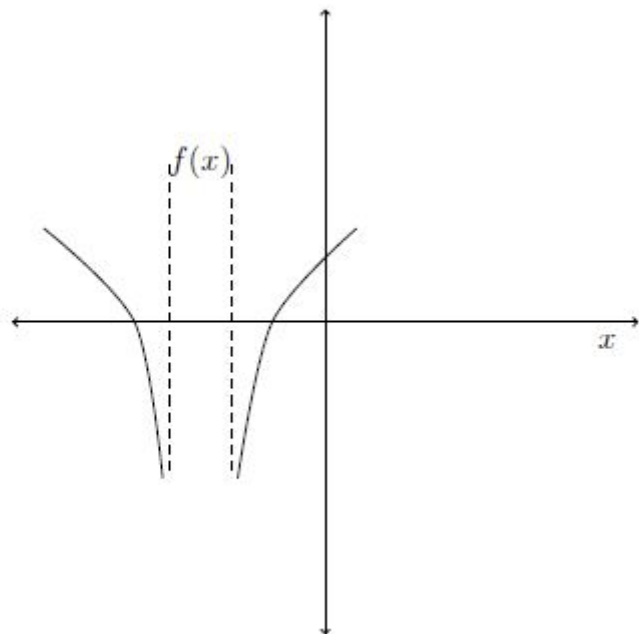
$$f(x) = -\ln(x^2 - 8x + 15).$$

**Options :**

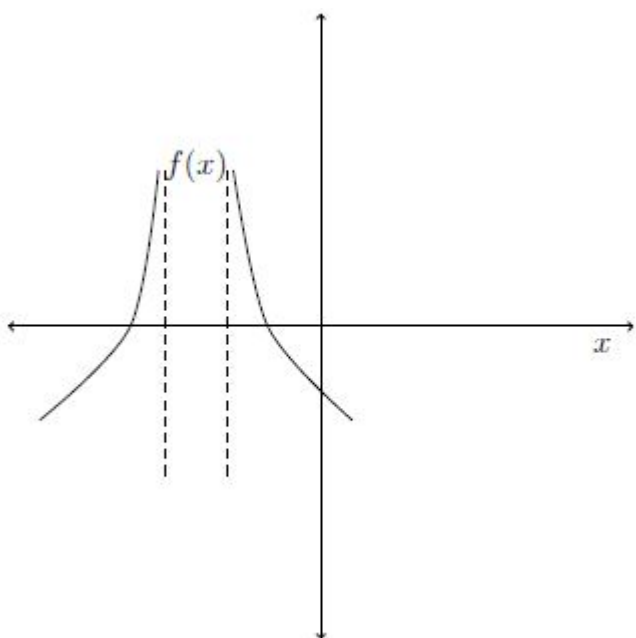


A. ✖

B. ✖



C. ✓



D. ✗

**Question Number : 15 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

If the cardinality of set  $A$  is  $p$  and the cardinality of set  $B$  is  $q$ , then the maximum number of possible relations between  $A$  and  $B$  could be

**Options :**

A. ✓  $2^{pq}$

B. ✗  $2^{\frac{p}{q}}$

C. ✗  $2^{\frac{q}{p}}$

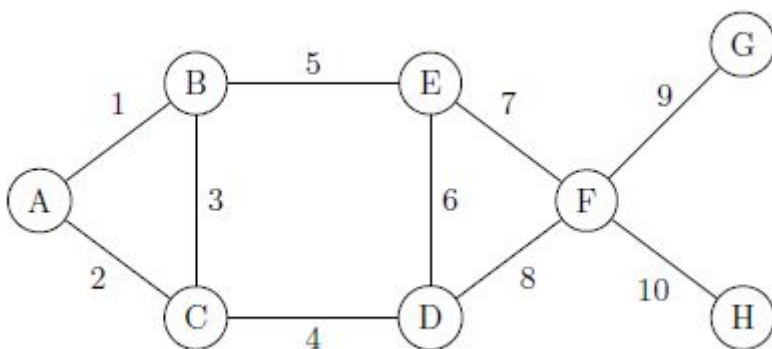
D. ✗  $2^{(p+q)}$

**Question Number : 16 Question Type : SA**

**Correct Marks : 3**

Question Label : Short Answer Question

What is the weight of a minimum cost spanning tree of the graph given below?



**NOTE:** Enter your answer to the nearest integer.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

38

## Sem1 English1

**Number of Questions :** 30

**Section Marks :** 50

**Question Type : COMPREHENSION**

**Question Numbers : (17 to 21)**

Question Label : Comprehension

**Read the passage and answer the given subquestions.**

Spice plants, such as coriander, cardamom or ginger, contain compounds which, when added to food, give it a distinctive flavour. Spices have been used for centuries in the preparation of both meat dishes for consumption and meat dishes for long-term storage. However, an initial analysis of traditional meat-based recipes indicated that spices are not used equally in different countries and regions, so we set about investigating global patterns of spice use. We hypothesized initially that the benefit of spices might lie in their anti-microbial properties. Those compounds in spice plants which give them their distinctive flavours probably first evolved to fight enemies such as plant-eating insects, fungi, and bacteria. Many of the organisms which afflict spice plants attack humans too, in particular the bacteria and fungi that live on and in dead plant and animal matter. So if spices kill these organisms, or inhibit their production of toxins, spice use in food might reduce our own chances of contracting food poisoning.



The results of our investigation supported this hypothesis. In common with other researchers, we found that all spices for which we could locate appropriate information have some antibacterial effects: half inhibit more than 75% of bacteria, and four (garlic, onion, allspice and oregano) inhibit 100% of those bacteria tested. In addition, many spices are powerful fungicides. Studies also show that when combined, spices exhibit even greater anti-bacterial properties than when each is used alone. This is interesting because the food recipes we used in our sample specify an average of four different spices. Some spices are so frequently combined that the blends have acquired special names, such as 'chili powder' (typically a mixture of red pepper, onion, paprika, garlic, cumin and oregano) and 'oriental five spice' (pepper, cinnamon, anise, fennel and cloves). One intriguing example is the French 'quatre epices' (pepper, cloves, ginger and nutmeg) which is often used in making sausages. Sausages are a rich medium for bacterial growth, and have frequently been implicated as the source of death from the botulism toxin, so the value of the anti-bacterial compounds in spices used for sausage preparation is obvious. A second hypothesis we made was that spice use would be heaviest in areas where foods spoil most quickly. Studies indicate that rates of bacterial growth increase dramatically with air temperature. Meat dishes that are prepared in advance and stored at room temperatures for more than a few hours, especially in tropical climates, typically show massive increases in bacterial counts. Of course temperatures within houses, particularly in areas where food is prepared and stored, may differ from those of the outside air, but usually it is even hotter in the kitchen.

Our survey of recipes from around the world confirmed this hypothesis: we found that countries with higher than average temperatures used more spices. Indeed, in hot countries nearly every meat-based recipe calls for at least one spice, and most include many spices, whereas in cooler ones, substantial proportions of dishes are prepared without spices, or with just a few. In other words, there is a significant positive correlation between mean temperature and the average quantity of spices used in cooking. But if the main function of spices is to make food safer to eat, how did our ancestors know which ones to use in the first place? It seems likely that people who happened to add spice plants to meat during preparation, especially in hot climates, would have been less likely to suffer from food poisoning than those who did not. Spice users may also have been able to store foods for longer before they spoiled, enabling them to tolerate longer periods of scarcity. Observation and imitation of the eating habits of these healthier individuals by others could spread spice use rapidly through a society. Also, families that used appropriate spices would rear a greater number of more healthy offspring, to whom spice-use traditions had been

demonstrated, and who possessed appropriate taste receptors. Another question which arises is why did people develop a taste for spicy foods? One possibility involves learned taste aversions. It is known that when people eat something that makes them ill, they tend to avoid that taste subsequently. The adaptive value of such learning is obvious. Adding a spice to a food that caused sickness might alter its taste enough to make it palatable again (i.e. it tastes like a different food), as well as kill the micro-organisms that caused the illness, thus rendering it safe for consumption. By this process, food aversions would more often be associated with unspiced (and therefore unsafe) foods, and food likings would be associated with spicy foods, especially in places where foods spoil rapidly. Over time people would have developed a natural preference for spicy food.

Of course, spice use is not the only way to avoid food poisoning. Cooking, and completely consuming wild game immediately after slaughter reduces opportunities for the growth of micro-organisms. However, this is practical only where fresh meat is abundant year-round. In areas where fresh meat is not consistently available, preservation may be accomplished by thoroughly cooking, salting, smoking, drying, and spicing meats. Indeed, salt has been used worldwide for centuries to preserve food. We suggest that all these practices have been adopted for essentially the same reason: to minimize the effects of harmful, food-borne organisms.

### Sub questions

**Question Number : 17 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

According to the passage, which of the following is not correct?

**Options :**

- A. ✖ Preservation methods can reduce food poisoning.
- B. ✖ Spices have anti-bacterial properties.
- C. ✔ In countries with low temperatures, the use of spices in dishes is substantially high.
- D. ✖ All of these.

**Question Number : 18 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Identify the term in the passage that means '*to kill animals for food*'.

**Options :**

- A. ✖ Afflict
- B. ✔ Slaughter
- C. ✖ Poisoning
- D. ✖ Spicing

**Question Number : 19 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Identify the term in the passage that is synonymous with '*distaste*'.

**Options :**

- A. ✖ Palatable
- B. ✖ Inhibit
- C. ✔ Aversion
- D. ✖ None of these

**Question Number : 20 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Which is not true about 'Quatre epices'\_\_\_\_\_.

**Options :**

- A. ✖ Is a French term
- B. ✔ Includes five spices
- C. ✖ Is used in making sausages
- D. ✖ All of these

**Question Number : 21 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

The use of a combination of different spices shows greater effectiveness in fighting bacteria than when used alone.

**Options :**

A. ✓ True

B. ✗ False

**Question Type : COMPREHENSION**

**Question Numbers : (22 to 26)**

Question Label : Comprehension

**Listen to the audio sample and answer the given subquestions.**



885\_640653\_0\_1984128\_setbenglish1finalexam.mp3

**Sub questions**

**Question Number : 22 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Choose the incorrect option about Stroop Test.

**Options :**

A. ✗ It is a well-known demonstration of flexibility.

B. ✗ It consists of colour words printed in different colours of ink.

C. ✗ It measures a person's selective attention capacity and skills, processing speed, and alongside other tests to evaluate overall executive processing abilities.

D. ✓ The more difficult one finds to state the colour, the more cognitively flexible he/she is.

**Question Number : 23 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

For the brain to function flexibly, it is important to restrict children from a lot of varying

experiences.

**Options :**

A. ✖ True

B. ✔ False

**Question Number : 24 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

\_\_\_\_\_ brains are born under construction.

**Options :**

A. ✖ Enfin

B. ✖ Infinite

C. ✔ Infant

D. ✖ Infit

**Question Number : 25 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Flexibility means tailoring a response to the specific situation, either by predicting well or by learning when there is prediction error. The underlined word means \_\_\_\_\_.

**Options :**

A. ✖ Limit

B. ✔ Adapt

C. ✖ Restrain

D. ✖ Quicken

**Question Number : 26 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Which of the following words from the audio means '*search for*'?

**Options :**

- A. ✖ Passive
- B. ✖ Expose
- C. ✔ Foraging
- D. ✖ Take in

**Question Number : 27 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

The sound /k/ is a velar sound.

**Options :**

- A. ✔ True
- B. ✖ False

**Question Number : 28 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Every consonant sound has an inbuilt 'a' in it.

**Options :**

- A. ✔ True
- B. ✖ False

**Question Number : 29 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Information is a three-syllable word.

**Options :**

- A. ✖ True
- B. ✔ False

**Question Number : 30 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

/p/,/t/,/k/ are known as \_\_\_\_\_ sounds.

**Options :**

A. ✖ dental

B. ✔ stop

**Question Number : 31 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Long series of numbers can be read out without a pause to make it easier for the listeners.

**Options :**

A. ✖ True

B. ✔ False

**Question Number : 32 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

English is spoken in many different accents when it should not be so.

**Options :**

A. ✖ True

B. ✔ False

**Question Number : 33 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

The negative form of the sentence 'Sarah reads the newspaper' is \_\_\_\_\_.

**Options :**

A. ✖ Sarah reads does not the newspaper.



- B. ✖ Sarah not reads the newspaper.
- C. ✔ Sarah does not read the newspaper.
- D. ✖ Sarah does not reads the newspaper.

**Question Number : 34 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

'He reads a pamphlet'. In this,

**Options :**

- A. ✖ Reads is a transitive verb.
- B. ✖ Pamphlet is the direct object.
- C. ✔ Both Reads is a transitive verb and Pamphlet is the direct object.

**Question Number : 35 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Either Vibha or her pets \_\_\_\_ responsible for this mess.

**Options :**

- A. ✖ Is
- B. ✔ Are
- C. ✖ Has
- D. ✖ Have

**Question Number : 36 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Do you think that the phrase 'out of place' and 'fish out of water' mean the same?

**Options :**

- A. ✖ Yes, because fish out of water means out of place.
- B. ✔ Yes, because fish out of water means trying new things and learning to like them.

- C. ✖ No, because fish out of water means out of order.
- D. ✖ No, because fish out of water means out of character.

**Question Number : 37 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

I tried to understand what he was saying about ocean currents, but it was \_\_\_\_\_.

**Options :**

- A. ✖ A nine days wonder
- B. ✖ Out of hand
- C. ✔ All Greek to me
- D. ✖ Adding insult to injury

**Question Number : 38 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

‘Hey, can I speak to Ramya?’ This sentence is in a formal register.

**Options :**

- A. ✖ True
- B. ✔ False

**Question Number : 39 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

The word ‘minute’ can have different meanings when different portions of the word are stressed.

**Options :**

- A. ✔ True
- B. ✖ False

**Question Number : 40 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

In the word 'department', which vowel is stressed?

**Options :**

- A. ✖ De
- B. ✔ Part
- C. ✖ Ment
- D. ✖ All the syllables in this word have equal stress

**Question Number : 41 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Word stress is encouraged to be learnt via the \_\_\_\_\_.

**Options :**

- A. ✖ Television
- B. ✖ Newspaper
- C. ✔ Dictionary
- D. ✖ Novels

**Question Number : 42 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

'Bin', 'Down', 'Got', all have \_\_\_\_ consonants in the beginning.

**Options :**

- A. ✔ Voiced
- B. ✖ Voiceless

**Question Number : 43 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

She has recovered \_\_\_\_\_.

**Options :**

- A. ✖ Complete
- B. ✖ Completeness
- C. ✖ Completed
- D. ✔ Completely

**Question Number : 44 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Identify the category of the underlined word.

Pass me the salt, please.

**Options :**

- A. ✖ Noun
- B. ✖ Adjective
- C. ✔ Verb
- D. ✖ Adverb

**Question Number : 45 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Identify whether the noun clause in the sentence below as subject or object:

How the boy behaved was not very polite.

**Options :**

- A. ✔ Subject
- B. ✖ Object

**Question Number : 46 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

One of my friends \_\_\_\_ going to the U.S next week.

**Options :**

A. ✓ Is

B. ✗ Are

**Question Number : 47 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Identify the misspelt word:

**Options :**

A. ✓ Bouquet

B. ✗ Separate

C. ✗ Foreign

D. ✗ Cemetery

**Question Number : 48 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

The shirt is too \_\_\_\_ on me.

**Options :**

A. ✗ Lose

B. ✗ Louse

C. ✓ Loose

D. ✗ Loosest

**Question Number : 49 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

John works **hard**. Hard is a/an \_\_\_\_\_.

**Options :**

- A. ✖ Adjective
- B. ✖ Noun
- C. ✖ Verb
- D. ✔ Adverb

**Question Number : 50 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Choose the correct question form of the sentence given below.

*He went to the hospital*

**Options :**

- A. ✖ Does he go to the hospital?
- B. ✖ Did he went to the hospital?
- C. ✖ Does he went to the hospital?
- D. ✔ Did he go to the hospital?

**Question Number : 51 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

This is the drawer \_\_\_\_\_ John keeps his money.

**Options :**

- A. ✖ Which
- B. ✔ Where
- C. ✖ That
- D. ✖ Who

**Question Number : 52 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Rearrange the following sentences in the correct order.

- a) Of those, metaphors are most commonly compared to and confused with similes.
- b) It may provide clarity or identify hidden similarities between two different ideas.
- c) Metaphors are often compared with other types of figurative language.
- d) A metaphor is a figure of speech that directly refers to one thing by mentioning another.

**Options :**

A. ✖ a,b,c,d

B. ✔ d,b,c,a

C. ✖ c,a,d,b

**Question Number : 53 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Rearrange the following sentences in the correct order.

- a) Greek is the official language of Cyprus, apart from being so in Greece.
- b) In addition to the membership, Greek is officially recognized as a minority language all over Albania.
- c) Greek, in its modern form, is the official language of Greece, where it is spoken by almost the entire population.
- d) Because of the membership of Greece and Cyprus in the European Union, Greek is one of the organization's 24 official languages.

**Options :**

A. ✔ c, a, d, b

B. ✖ a, b, c, d

C. ✖ b, c, d, a

**Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group**



## Comprehension Questions : No

### Question Numbers : (54 to 56)

Question Label : Comprehension

**Fill in the Blanks in the following sentences with appropriate options from those given in the subquestions:**

When the images of two aeroplanes crashing into the World Trade Center were transmitted to a global audience on 11 September 2001, the meaning of the event seemed abundantly clear to all. North America had become the tragic victim of a terrorist attack. The sense of tragedy surrounding the event was highlighted in media coverage showing the traumatised reaction of audiences in Europe and America as they received the news. However, and in stark contrast to these scenes of mourning, the media \_\_\_Blank 1\_\_\_ screened footage of people in Palestine apparently celebrating the news. \_\_\_Blank 2\_\_\_ opposing reactions by different audiences to media coverage of the same event suggested the collapse of the twin towers had no single meaning. \_\_\_Blank 3\_\_\_ other things, encoding-decoding sheds light on why divergent readings of the same media event occur by exploring the ideological role of the media and the extent to which it governs meanings and gives rise to alternative ones.

### Sub questions

**Question Number : 54 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Select the correct answer for **Blank 1**

**Options :**

A. ✖ Among

B. ✔ Also

C. ✖ Such

**Question Number : 55 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Select the correct answer for **Blank 2**

**Options :**

A. ✖ Among

B. ✖ Also

C. ✔ Such

**Question Number : 56 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Select the correct answer for **Blank 3**

**Options :**

A. ✔ Among

B. ✖ Also

C. ✖ Such

## Sem2 Maths2

**Number of Questions :** 7

**Section Marks :** 50

**Question Number : 57 Question Type : MSQ**

**Correct Marks : 3**

Question Label : Multiple Select Question

Define a function

$$f(x) = \begin{cases} \frac{|x-5|}{x-5} & \text{if } x \neq 5 \\ 0 & \text{if } x = 5 \end{cases}$$

Which of the following option(s) is(are) true?

**Options :**

A. ✖  $\lim_{x \rightarrow 5^+} f(x) = f(5)$ .

B. ✓  $\lim_{x \rightarrow 5^-} f(x)$  exists.

C. ✗  $f$  is continuous at  $x = 5$ .

D. ✓  $f$  is not differentiable at  $x = 5$ .

E. ✗  $f'(7) = 1$ .

**Question Type : COMPREHENSION**

**Question Numbers : (58 to 59)**

Question Label : Comprehension

Define a function  $f$  in the interval  $[-2, 10]$  as follows:

$$f(x) = \begin{cases} 2x^2 & \text{if } -2 \leq x < 2 \\ (x-2)^3 & \text{if } 2 \leq x < 4 \\ -\frac{2}{3}(x-4) + 4 & \text{if } 4 \leq x \leq 10 \end{cases}$$

Figure M2ES1 represents the graph of the function  $f$ . The solid points denote the value of the function at the points, and the values denoted by the hollow points are not taken by the functions.

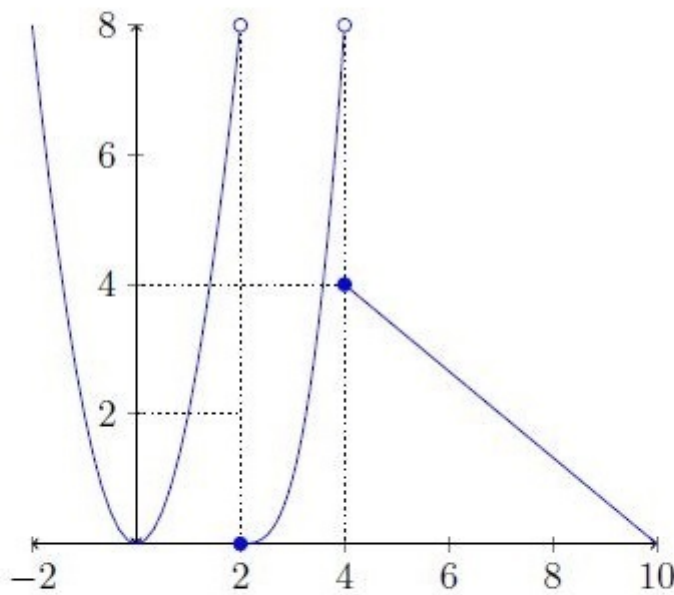


Figure : M2ES1

Answer the subquestions using the given information.

### Sub questions

**Question Number : 58 Question Type : MSQ**

**Correct Marks : 4**

Question Label : Multiple Select Question

Choose the set of correct options about estimating the area of the region bounded by the graph of function  $f$ , above the interval  $[0, 10]$  using Riemann sums.

**Options :**

- A. ✖ Estimated area will be 21 sq unit, by taking 5 subintervals of equal length and the left end points of the subintervals for the height of the rectangles.
- B. ✔ Estimated area will be 16 sq unit, by taking 5 subintervals of equal length and the left end

points of the subintervals for the height of the rectangles.

C. ✓ Estimated area will be 18 sq unit, by taking 5 subintervals of equal length and the mid points of the subintervals for the height of the rectangles.

D. ✗ Estimated area will be 19 sq unit, by taking 5 subintervals of equal length and the mid points of the subintervals for the height of the rectangles.

**Question Number : 59 Question Type : MCQ**

**Correct Marks : 3**

Question Label : Multiple Choice Question

Match the properties of the function mentioned in Column A with the appropriate numerical values given in Column B:

	Properties		Numerical values
a)	Number of critical points in $(-2, 10)$	1)	3
b)	In $[-2, 10]$ , the global maximum is attained at	2)	2
c)	In $[-2, 10]$ , the global minimum is attained at	3)	0
d)	Number of points where $f$ is not differentiable in $(-2, 10)$	4)	-2

Table: M2ES1

**Options :**

A. ✗  $a \rightarrow 1, b \rightarrow 2, c \rightarrow 3, d \rightarrow 4$

B. ✗  $a \rightarrow 2, b \rightarrow 1, c \rightarrow 3, d \rightarrow 4$

C. ✓  $a \rightarrow 1, b \rightarrow 4, c \rightarrow 3, d \rightarrow 2$

D. ✗  $a \rightarrow 2, b \rightarrow 3, c \rightarrow 4, d \rightarrow 1$

**Question Type : COMPREHENSION**

**Question Numbers : (60 to 61)**

Question Label : Comprehension

Consider the system of linear equations given by  $Ax = b$ ,

$$\text{where } A = \begin{bmatrix} 1 & 0 & 2 \\ 2 & 4 & 5 \\ 7 & 8 & 16 \end{bmatrix}, x = \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix}, \text{ and } b = \begin{bmatrix} 4 \\ 11 \\ 33 \end{bmatrix}.$$

The row echelon form of the matrix  $A$  is given by  $R = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 1 & \frac{1}{4} \\ 0 & 0 & 0 \end{bmatrix}.$ 

Answer the given subquestions using the information given above.

**Sub questions****Question Number : 60 Question Type : MCQ****Correct Marks : 4**

Question Label : Multiple Choice Question

The given system of linear equations

 $Ax = b$  has,**Options :**

A. ✖ a unique solution and the solution is  $x = \begin{bmatrix} 1 \\ 2 \\ 1 \end{bmatrix}$

B. ✔ no solution.

C. ✖ infinitely many solutions.

D. ✖ a unique solution and the solution is  $x = \begin{bmatrix} -1 \\ \frac{5}{4} \\ 2 \end{bmatrix}$

**Question Number : 61 Question Type : MSQ****Correct Marks : 3**

Question Label : Multiple Select Question

Choose the set of correct options.

**Options :**

The system of linear equations  $Ax = 0$ , where  $A$

A. ✖ and  $x$  are given, has the trivial solution only.

Rank of the matrix  $R$  is not equal to the

B. ✖ rank of the matrix  $A$ .

C. ✖  $\text{Nullity}(A) = 0$ , and  $\text{Rank}(A) = 3$ .

D. ✔  $\text{Nullity}(A) = 1$ , and  $\text{Rank}(A) = 2$ .

The solution space of the system of linear equations

E. ✔  $Rx = 0$  is the same as the nullspace of  $A$ .

**Question Number : 62 Question Type : MCQ**

**Correct Marks : 5**

Question Label : Multiple Choice Question



Match the vector subspaces of  $\mathbb{R}^3$  (with the usual scalar multiplication and vector addition) in column A with their bases in column B and the dimensions of the vector spaces in column C in Table : M2ES2.

	Vector space (Column A)		Bases (Column B)		Dimension of the vector space (Column C)
a)	$W = \{(x, y, z) \mid x + y + z = 0, x - z = 0, x, y, z \in \mathbb{R}\}$	1)	$\{(1, 0, 0), (0, 0, 1)\}$	i)	1
b)	$W = \{(x, y, z) \mid y = 0, x, y, z \in \mathbb{R}\}$	2)	$\{(1, 0, 0), (1, 1, 0), (1, 1, 1)\}$	ii)	3
c)	$W = \text{Span}\{(1, 2, 1), (2, 1, 3), (0, 0, 2)\}$	3)	$\{(1, -2, 1)\}$	iii)	2
d)	$W = \text{Span}\{(1, 2, 1), (2, 1, 3), (1, -4, 3)\}$	4)	$\{(3, 0, 5), (0, 3, -1)\}$	iv)	2

Table : M2ES2

**Options :**

A. ✖ a  $\rightarrow$  1  $\rightarrow$  iii, b  $\rightarrow$  3  $\rightarrow$  i, c  $\rightarrow$  4  $\rightarrow$  iv, d  $\rightarrow$  2  $\rightarrow$  ii

B. ✖ a  $\rightarrow$  3  $\rightarrow$  i, b  $\rightarrow$  1  $\rightarrow$  iii, c  $\rightarrow$  4  $\rightarrow$  iv, d  $\rightarrow$  2  $\rightarrow$  ii

C. ✔ a  $\rightarrow$  3  $\rightarrow$  i, b  $\rightarrow$  1  $\rightarrow$  iii, c  $\rightarrow$  2  $\rightarrow$  ii, d  $\rightarrow$  4  $\rightarrow$  iv

D. ✖ a  $\rightarrow$  4  $\rightarrow$  iv, b  $\rightarrow$  1  $\rightarrow$  iii, c  $\rightarrow$  3  $\rightarrow$  i, d  $\rightarrow$  2  $\rightarrow$  ii

**Question Number : 63 Question Type : MSQ**

**Correct Marks : 5**

Question Label : Multiple Select Question

Choose the set of correct options.

**Options :**

For any inner product space  $V$ , 0 is the only vector which is orthogonal to every vector in  $V$ .

A. ✔

If  $u$  and  $v$  are two orthogonal vectors in  $\mathbb{R}^2$  with respect to the usual inner product, then  $T(u)$  and  $T(v)$  must be orthogonal vectors for any linear

B. ✖ transformation  $T : \mathbb{R}^2 \rightarrow \mathbb{R}^2$ .

C. ✖ Every orthonormal set of vectors in  $V$  is an orthonormal basis of  $V$ .

Let  $u$  and  $v$  be two orthogonal vectors of an inner product space  $V$ , then  $\|u + v\|^2 = \|u\|^2 + \|v\|^2$ .

D. ✔

If  $T$  is an orthogonal linear transformation from the inner product space  $\mathbb{R}^n$  to  $\mathbb{R}^n$ , then  $T$  is both one-one and onto.

E. ✔

### Question Type : COMPREHENSION

#### Question Numbers : (64 to 65)

Question Label : Comprehension

Let  $f : \mathbb{R}^2 \rightarrow \mathbb{R}$  be a multivariable scalar valued continuous function, such that

$$f_x(x, y) = 2x \sin(x^2 + y^2) \text{ and } f_y(x, y) = 2y \sin(x^2 + y^2).$$

Suppose  $\lim_{(x,y) \rightarrow (0,0)} f(x, y) = 6$ .

Answer the given subquestions using the information given above.

#### Sub questions

#### Question Number : 64 Question Type : SA

Correct Marks : 2

Question Label : Short Answer Question

Let  $L(x, y) = Ax + By + C$  be the linear approximation of the function  $z = f(x, y)$  at the point  $(0, 0)$ , then find the value of  $(C - A)(C + 3B)$ .

**NOTE:** Enter your answer to the nearest integer.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

36

**Question Number : 65 Question Type : MCQ**

**Correct Marks : 3**

Question Label : Multiple Choice Question

Find out the directional derivative of  $f$  at the point  $(1, 1)$  in the direction of the vector  $(1, 1)$ .

**Options :**

A. ✖  $2\sqrt{2} \cos 2$

B. ✔  $2\sqrt{2} \sin 2$

C. ✖  $\sqrt{2} \sin 2$

D. ✖  $\sqrt{2} \cos 2$

**Question Type : COMPREHENSION**

**Question Numbers : (66 to 68)**

Question Label : Comprehension

Suppose the temperature ( $T$ ) at a point  $(x, y, z)$  in  $\mathbb{R}^3$  is given by the function

$$T(x, y, z) = e^{x+y+z}$$

Let  $T_1$ ,  $T_2$ , and  $T_3$  be the tangent planes to the function  $f(x, y) = \sqrt{14 - x^2 - y^2}$  at the points  $(2, 3)$ ,  $(3, 2)$ , and  $(3, 1)$ , respectively.

The set of points on each plane  $T_1$ ,  $T_2$ , and  $T_3$  form affine subspaces  $A_1$ ,  $A_2$ , and  $A_3$ , respectively, of the vector space  $\mathbb{R}^3$ , with respect to usual addition and scalar multiplication. Let  $V_1$ ,  $V_2$ , and  $V_3$  denote the vector subspaces corresponding to the affine subspaces  $A_1$ ,  $A_2$ , and  $A_3$ , respectively.

Answer the subquestions using the given information.

### Sub questions

**Question Number : 66 Question Type : MCQ**

**Correct Marks : 6**

Question Label : Multiple Choice Question

Which of the following denotes the vector subspace  $V_1 \cap V_3$ ?

**Options :**

A. ✖  $\{(x, y, -x - y) \mid x, y \in \mathbb{R}\}$

B. ✔  $\{(-5z, z, 7z) \mid z \in \mathbb{R}\}$

C. ✖  $\{(-2z, -2z, z) \mid z \in \mathbb{R}\}$

D. ✖  $\{(z, z, -5z) \mid z \in \mathbb{R}\}$

**Question Number : 67 Question Type : MCQ**

**Correct Marks : 6**

Question Label : Multiple Choice Question

Which of the following denotes the maximum rate of change of temperature ( $T$ ) at the point of intersection of the tangent planes  $T_1$ ,  $T_2$ , and  $T_3$ ?

**Options :**

A. ✖  $3e^{\frac{7}{3}}$

B. ✖  $\sqrt{3}e^{\frac{7}{3}}$

C. ✔  $\sqrt{3}e^7$

D. ✖  $3e^7$

**Question Number : 68 Question Type : MCQ**

**Correct Marks : 6**

Question Label : Multiple Choice Question

Let  $T$  be a linear transformation between the vector subspaces  $V_1$  and  $V_2$ . Suppose the matrix representation of  $T$  with respect to the ordered bases  $\beta = \{(1, 0, -2), (0, 1, -3)\}$  for  $V_1$  and  $\gamma = \{(1, 0, -3), (0, 1, -2)\}$  for  $V_2$  is given by  $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ . Then which of the following mappings can be an affine mapping  $f$  between the affine subspaces  $A_1$  and  $A_2$ , corresponding to  $T$ ?

**Options :**

A. ✖  $f(3+x, 2+y, 5+z) = (1+z, 2+y, 3+x)$

B. ✖  $f(3+x, 2+y, 5+z) = (1+y, 2+x, 3+z)$

C. ✖  $f(3 + x, 1 + y, 5 + z) = (1 + z, 2 + y, 7 + x)$

D. ✔  $f(3 + x, 1 + y, 5 + z) = (1 + y, 2 + x, 7 + z)$

## Sem2 English2

Number of Questions : 29

Section Marks : 50

**Question Type : COMPREHENSION**

**Question Numbers : (69 to 78)**

Question Label : Comprehension

Listen to the audio carefully and answer the given subquestions:



885\_640653\_0\_1984128\_setbenglish2finalexam.mp3

**Sub questions**

**Question Number : 69 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

The word **exceptional** is stressed on the \_\_\_\_.

**Options :**

A. ✖ First syllable

B. ✔ Second syllable

C. ✖ Third syllable

D. ✖ Not stressed

**Question Number : 70 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

The word **identical** is stressed on the \_\_\_\_\_.

**Options :**

A. ✖ First syllable

B. ✔ Second syllable

C. ✖ Third syllable

D. ✖ Not stressed

**Question Number : 71 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

The word **atmosphere** is stressed on the \_\_\_\_\_.

**Options :**

A. ✔ First syllable

B. ✖ Second syllable

C. ✖ Third syllable

D. ✖ Not stressed

**Question Number : 72 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

The word **survive** is stressed on the \_\_\_\_.

**Options :**

A. ✖ First syllable

B. ✔ Second syllable

C. ✖ Third syllable



D. ✖ Not stressed

**Question Number : 73 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Identify the number of syllables in the word '**speculate**'.

**Options :**

A. ✖ 2

B. ✔ 3

C. ✖ 4

D. ✖ 5

**Question Number : 74 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Which of the following is NOT a monosyllabic word?

**Options :**

A. ✖ Few

B. ✖ Dark

C. ✖ Streaks

D. ✔ Appear

**Question Number : 75 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Identify the number of syllables in the word '**venus**'.

**Options :**

A. ✖ 1

B. ✔ 2

C. ✖ 3



D. ✖ 4

**Question Number : 76 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Identify the number of syllables in the word '**phenomenon**'.

**Options :**

A. ✖ 2

B. ✖ 3

C. ✔ 4

D. ✖ 5

**Question Number : 77 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Identify the number of syllables in the word '**brightly**'.

**Options :**

A. ✖ 1

B. ✔ 2

C. ✖ 3

D. ✖ 4

**Question Number : 78 Question Type : MCQ**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Identify the number of syllables in the word '**infernal**'.

**Options :**

A. ✖ 1

B. ✖ 2

C. ✔ 3

D. ✖ 4

**Question Number : 79 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

'To overcome the jetlag, the children must go to bed early tonight whether they like it or not.' has a subordinate noun clause.

**Options :**

A. ✖ TRUE

B. ✔ FALSE

**Question Number : 80 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

My father, \_\_\_\_\_ seventy-year old walking stick is never out of his sight, is the healthiest man I have ever met.

**Options :**

A. ✖ Which

B. ✖ Who is

C. ✔ Whose

D. ✖ That

**Question Number : 81 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

The idlis which were soft and fluffy were accompanied by sambhar and chutney' In this, the complement is \_\_\_\_\_.

**Options :**

A. ✖ The idlis

B. ✖ Which were soft and fluffy

C. ✖ Accompanied by sambhar and chutney

D. ✔ Sambhar and chutney

**Question Number : 82 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**State whether the given sentence is appropriately punctuated.**

Please keep in mind that there is no shortcut to hard work.

**Options :**

A. ✔ Yes

B. ✖ No

**Question Number : 83 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Creating new words through the process of affixation is called \_\_\_\_\_.

**Options :**

A. ✔ Derivation

B. ✖ Integration

C. ✖ Clipping

D. ✖ Backformation

**Question Number : 84 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Identify the verb tense and aspect in the following sentence.**

Reshma is riding a motorbike.

**Options :**

- A. ✖ Simple present
- B. ✔ Present continuous
- C. ✖ Past continuous
- D. ✖ Present perfect

**Question Number : 85 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Identify the most appropriate sentence to use in the following social setting.**

**Setting: A student approaching a professor in a university.**

Requesting time to discuss a project idea.

**Options :**

- A. ✖ Are you free now?
- B. ✖ When will you have time to listen to my idea?
- C. ✔ I have a project idea that I was hoping to discuss with you. Will you be interested in discussing it some time?
- D. ✖ Can you please, please listen to my project idea?

**Question Number : 86 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Identify the most appropriate sentence to use in the following social setting.**

**Setting: A student approaching a professor in a university.**

Inviting a Professor to a student-run event.

**Options :**

- A. ✔ We would love to have you there. Please join us if you have the time.
- B. ✖ Will you come?
- C. ✖ Please come. We will miss you otherwise.
- D. ✖ Do join us at the event.

**Question Number : 87 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Identify the adverb in the following sentence.**

They are always late to class in the morning.

**Options :**

A. ✖ To class

B. ✖ In the morning

C. ✖ Always

D. ✔ All of these

**Question Number : 88 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

\_\_\_\_\_ you please print a copy for me as well? (Formal and polite)

**Options :**

A. ✖ Will

B. ✔ Would

**Question Number : 89 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Fill in the blank with the right form of the verb for the passive sentence given below.**

The letter \_\_\_\_\_ by Sarah. (Active voice: Sarah will post the letter)

**Options :**

A. ✖ Has been posted

B. ✖ Have been posted

C. ✖ Will have been posted

D. ✔ Will be posted

**Question Number : 90 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Please inform me\_\_\_\_\_ there is any change in the programme schedule.

**Options :**

A. ✖ Whether

B. ✔ If

C. ✖ Both whether and if

**Question Number : 91 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Identify the embedded question for the following direct question.**

What time did he arrive?

**Options :**

A. ✔ I wonder what time he arrived.

B. ✖ I wonder what time did he arrive.

**Question Number : 92 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Identify the question tag for the following sentence.**

You haven't had your breakfast, \_\_\_\_?

**Options :**

A. ✖ Haven't you had

B. ✓ Have you

C. ✗ Haven't you

D. ✗ Do you

**Question Number : 93 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Identify the question tag for the following sentence.**

They could have left the place, \_\_\_\_\_?

**Options :**

A. ✓ Couldn't they

B. ✗ Could they

C. ✗ Can they

D. ✗ Can't they

**Question Number : 94 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Consider the sentence given below and answer the question that follow:**

**John laughed loudly.**

The tense of the verb in the above sentence is \_\_\_\_\_.

**Options :**

A. ✗ Present tense

B. ✓ Past tense

C. ✗ Future tense

D. ✗ No tense

**Question Number : 95 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Complete the following sentence with the most appropriate word.**

\_\_\_\_\_ days are almost here.

**Options :**

A. ✖ Wonderfully

B. ✖ Wondrously

C. ✔ Wonderful

D. ✖ Wanderful

**Question Number : 96 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

The expression **If I may finish what I am saying...** indicates \_\_\_\_\_.

**Options :**

A. ✔ Handling interruptions

B. ✖ Interrupting

C. ✖ Moving the discussion on

D. ✖ Making a suggestion

**Question Number : 97 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Which of the following is a receptive skill?

**Options :**

A. ✖ Writing

B. ✖ Speaking

C. ✔ Listening

D. ✖ All of these



**Question Number : 98 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Two days \_\_\_\_\_ all I need to study for the exam.

**Options :**

A. ✖ Were

B. ✖ Was

C. ✖ Are

D. ✔ Is

**Question Number : 99 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

'Upon reading the book of Feynman's lectures, Supriya was captivated.' The participle in this sentence is \_\_\_\_\_.

**Options :**

A. ✖ Upon

B. ✖ Was

C. ✔ Reading

D. ✖ Captivated

**Question Number : 100 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Intonation is a feature of \_\_\_\_\_.

**Options :**

A. ✔ Speech

B. ✖ Writing

C. ✖ Reading

D. ✖ Comprehension

**Question Number : 101 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

What he is saying is \_\_\_\_\_ not true.

**Options :**

A. ✖ Stupidly

B. ✔ Simply

C. ✖ Adamantly

D. ✖ Disappointingly

**Question Number : 102 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

'The tsunami was so unexpected that there was very little time to evacuate people.' Here, tsunami is of \_\_\_\_\_ origin.

**Options :**

A. ✖ Latin

B. ✖ French

C. ✖ Chinese

D. ✔ Japanese

**Question Number : 103 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

'You must have faith, good things come to those who wait' is a sentence with a metaphor.

**Options :**

A. ✖ TRUE

B. ✔ FALSE

**Question Number : 104 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

\_\_\_\_\_ refers to the kind of speech act or event.

**Options :**

- A. ✓ Genre
- B. ✗ Instrumentality
- C. ✗ Setting
- D. ✗ Norm

**Question Number : 105 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

What does the **I** in the acronym SPEAKING (model) refer to?

**Options :**

- A. ✗ Integration
- B. ✗ Inception
- C. ✗ Introduction
- D. ✓ Instrumentalities

**Question Type : COMPREHENSION**

**Question Numbers : (106 to 108)**

Question Label : Comprehension

**Fill in the blanks with correct expressions of numbers/values/quantity**

Each year, among the \_\_\_\_\_ **Blank 1** \_\_\_\_\_ 10,600 (1992-2002 year average) Delaware births, there are about 90 infant deaths. More than 70 percent of these occur in the neonatal period (the first month of life). The remainder occur during the postneonatal period, from one month to the end of the first year of life. This suggests that most causes of infant death arise from maternal

health factors, before or during pregnancy, that result in less healthy infants. Compared to the nation, Delaware's increase in IMR began earlier, in the mid to late 1990s. \_\_\_\_\_ **Blank 2** \_\_\_\_\_ one-third of the rise was due to increases in low and very low birth weight (VLBW) infants. Two-thirds was due to an increase in the risk of mortality among VLBW infants. The increased IMR among VLBW infants occurred \_\_\_\_\_ **Blank 3** \_\_\_\_\_ among conventionally low-risk women who were married, 30 years of age or older, living in suburban New Castle County, and receiving early prenatal care.

Based on the above data, answer the given subquestions.

### Sub questions

**Question Number : 106 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Select the correct answer for **Blank 1** \_\_\_\_\_

**Options :**

A. ✓ Approximately

B. ✗ About

C. ✗ Mostly

**Question Number : 107 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Select the correct answer for **Blank 2** \_\_\_\_\_

**Options :**

A. ✗ Approximately

B. ✓ About

C. ✗ Mostly

**Question Number : 108 Question Type : MCQ**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Select the correct answer for **Blank 3**\_\_\_\_\_

**Options :**

A. ✖ Approximately

B. ✖ About

C. ✔ Mostly