

National Testing Agency

Question Paper Name :	ICMR Pharmacology 14th Sep 2024 Shift 2
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Pharmacology

Group Number :	1
Group Id :	74957210
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	150

Section A General Aptitude

Section Id :	74957228
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	42
Number of Questions to be attempted :	42
Section Marks :	50
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	74957246
Question Shuffling Allowed :	No

Question Id : 7495721369 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (1 to 5)

Question Label : Comprehension

Read the passage and answer the questions that follow :

The opportunity that beckons India is to make optimal use of technology, management, entrepreneurship and investments to overcome the challenges of this decade and beyond. Yesterday's goals cannot be a benchmark as India contemplates graduating to the company of the developed nations of the world. Our targets must be higher, our coverage more inclusive and above all, the methods to achieve must be unique.

Since, Independence, India as a nation has indeed made massive progress in almost every social and economic field. But, as we strive to have an economically developed nation by 2020, each incremental step opens up new vistas before us. After every few pages, we mark our place in history, heading for a new chapter of challenges not experienced earlier.

Following a steady decline in world income – from about 33 per cent in 0 CE to around 25 per cent in 1600 CE – India's share declined even further during the British Raj, falling sharply from about 16 per cent in 1820 CE, to less than 4 per cent at the time of Independence. Since Independence, there has been a steady rise in income, and the per capita national product has increased by more than five times, from Rs. 5,700 in 1950 to about Rs. 32,000 in 2008, and today, India's share in world income – purchasing power parity (PPP) – stands at about 6.3 per cent. But while the economy has been growing steadily and poverty, as a percentage, declining steadily, the absolute number of people below the poverty line has been constant.

Sub questions

Question Number : 1 Question Id : 7495721370 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

According to the passage, use of the phrase "make optimal use of" means :

- (1) set a higher benchmark for growth
- (2) using the methods effectively and efficiently
- (3) experiment with new challenges
- (4) mark our place in history

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 2 Question Id : 7495721371 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which word in the given passage means "without interruption"?

- | | |
|----------------|--------------|
| (1) Consistent | (2) Steady |
| (3) Optimal | (4) Constant |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 3 Question Id : 7495721372 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

What does India need to become a developed nation?

- (A) Take rapid and incremental steps towards progress
- (B) Contemplate on only yesterday's goals
- (C) Make thoughtful usage of technology in various fields
- (D) Work steadily on economic indicators
- (E) Set higher, inclusive and unique targets

Choose the correct answer from the options given below :

- | | |
|------------------------|------------------------|
| (1) (A), (B), (C) only | (2) (B), (D), (E) only |
| (3) (A), (D), (E) only | (4) (C), (D), (E) only |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 4 Question Id : 7495721373 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Since Independence, there has been a steady rise in income and the increase of per capita national product by five times from ₹ 5,700 in 1947 to about ₹ 32,000 in 2008.

Statement II : Poverty has declined while the economy has grown but the absolute number of people below poverty line has been constant.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 5 Question Id : 7495721374 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Read the given passage and Match List I with List II.

List I (India's share in world GDP)	List II (Year)
(A) 16 percent	(I) 0 CE
(B) 33 percent	(II) 1820 CE
(C) 25 percent	(III) 1947 CE
(D) 4 percent	(IV) 1600 CE

Choose the correct options given below :

- (1) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)
- (2) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
- (3) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
- (4) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Sub-Section Number : 2
Sub-Section Id : 74957247
Question Shuffling Allowed : No

Question Id : 7495721375 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (6 to 10) Question Label : Comprehension

Read the following passage and answer the questions that follow :

Let us discuss coal, another fossil fuel. Even though India has abundant quantities of coal, it is constrained by regional locations, a high ash content that affects the thermal efficiency of our power plants, besides which there are also environmental concerns. Thus, a movement towards energy independence would demand accelerated work in the production of energy from the coal sector through integrated gasification and a combined cycle route.

In 2030, the total energy requirement of the nation is expected to be 4,00,000 MW. By that time, if we were to follow the present route, the power generated from coal-based power plants would increase from the existing 80,000 MW to 2,00,000 MW. This would demand a significant build-up of thermal power stations and a large-scale expansion of coal fields, leading, naturally, to much higher levels of pollution.

The hydel capacity generated through normal water sources and by the interlinking of rivers is expected to contribute an additional 50,000 MW. Numerous large-scale solar energy farms with a capacity of hundreds of megawatts could together contribute around 55,000 MW. The nuclear power plants should have a target of 50,000 MW of power. At least 64,000 MW of electrical power should come from wind energy. The balance 51,000 MW has to be generated through conventional thermal plants, through coal and gas, and renewable sources of energy such as biomass, through burning municipal solid waste and solar thermal power. The most significant aspect, however, is that the power generated through renewable energy technologies has to be increased to 28 per cent from the present 5 per cent.

Sub questions

Question Number : 6 Question Id : 7495721376 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

To meet the energy requirements of the nation, the power generation through renewable energy technologies should be :

- (1) increased from 80,000 MW to 4,00,000 MW
- (2) covering the remaining balance of 51,000 MW generated through various modes
- (3) accelerated through integrated gasification and combined cycle route
- (4) increased by 23 percent from the present 5 percent

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 7 Question Id : 7495721377 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which word in the passage is the antonym of "rare"?

- | | |
|-----------------|----------------|
| (1) existing | (2) numerous |
| (3) significant | (4) additional |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 8 Question Id : 7495721378 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following factor(s) are a reason behind the constrained utilization of coal as a fuel for generating energy?

- (A) low thermal efficiency of our power plants
- (B) regional locations
- (C) lack of integrated gasification
- (D) high ash content
- (E) environmental concerns

Choose the correct answer from the options given below :

- (1) (A), (B), (C) only
- (2) (B), (C), (D) only
- (3) (B), (D), (E) only
- (4) (B), (D), (A) only

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 9 Question Id : 7495721379 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements that are based on the passage mentioned above :

Statement I : To meet the expected energy requirements in 2030, the power generation through renewable energy technologies has to be increased by percent.

Statement II : The balance 51,000 MW will be generated through conventional thermal plants.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 10 Question Id : 7495721380 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II on the basis of the passage mentioned above :

List I (Power)	List II (Energy Source)
(A) 50,000 MW	(I) Wind energy
(B) 55,000 MW	(II) Thermal energy
(C) 51,000 MW	(III) Hydel energy
(D) 64,000 MW	(IV) Solar energy

Choose the correct options given below :

- (1) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
- (4) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

Options :

- 1. 1
- 2. 2
- 3. 3

4. 4

Sub-Section Number : 3
Sub-Section Id : 74957248
Question Shuffling Allowed : Yes

Question Number : 11 Question Id : 7495721381 Question Type : MCQ Option Shuffling : No
Correct Marks : 1 Wrong Marks : 0.25

If it was Saturday on 17th December, 2002, what was the day on 26th December 2004?

- (1) Monday
- (2) Sunday
- (3) Tuesday
- (4) Thursday

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 12 Question Id : 7495721382 Question Type : MCQ Option Shuffling : No
Correct Marks : 1 Wrong Marks : 0.25

Study the given pattern and select the number that can replace question mark in the given matrix :

11	103	9
13	157	6
15	?	7

- (1) 175
- (2) 196
- (3) 211
- (4) 225

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 13 Question Id : 7495721383 Question Type : MCQ Option Shuffling : No
Correct Marks : 1 Wrong Marks : 0.25

If in a certain code language 'FRIEND' is written as 'JPMCRB', 'UNCLE' is written as 'YLGJI', then what will be the code for 'LEADER'?

- | | |
|------------|------------|
| (1) QCDBIP | (2) PDFBDL |
| (3) PCEBIP | (4) RBFCNR |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 14 Question Id : 7495721384 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Find the missing number from the given alternatives.

$$\begin{array}{c} 9 \\ 5 \quad \textcircled{61} \quad 3 \\ 6 \end{array}$$

$$\begin{array}{c} 8 \\ 4 \quad \textcircled{?} \quad 2 \\ 3 \end{array}$$

$$\begin{array}{c} 11 \\ 3 \quad \textcircled{125} \quad 1 \\ 2 \end{array}$$

- | | |
|--------|--------|
| (1) 41 | (2) 56 |
| (3) 67 | (4) 79 |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 15 Question Id : 7495721385 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

If, $P \times Q$ means P is the husband of Q.

$P + Q$ means P is the father of Q.

$P - Q$ means P is the mother of Q.

$P \div Q$ means P is the sister of Q.

Then, which of the following relations shows that C is the paternal grandfather of D?

(1) $C \times B - E \div D + A$

(2) $C + A \times B \div E \div D$

(3) $C + B \times A - E \div D$

(4) $C \times B \div E + A - D$

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 16 Question Id : 7495721386 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In this question a number series is given. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

856, 849, 824, 763, ?, 431

(1) 681

(2) 642

(3) 535

(4) 495

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 17 Question Id : 7495721387 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Sunita starts from her home towards North. After walking 15 meters, she turned to her right and walked 55 meters. Then she turned to her left and after walking a distance of 20 meters turned to her left again and walked 67 meters. What is the shortest distance between her home and final position and what is the direction of final position with respect to her home?

(1) 26 m, North-West

(2) 35 m, North-East

(3) 37 m, North-West

(4) 49 m, North-East

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 18 Question Id : 7495721388 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Seven friends A, B, C, D, E, F and G are sitting on a straight bench all facing north. There are exactly three friends sitting between A and B. D is sitting to the left of B. Only one friend is sitting to the left of A. B is sitting immediately left of F. Only one friend is sitting between D and A. Who is sitting at the extreme right end?

- | | |
|-------|-------|
| (1) E | (2) F |
| (3) C | (4) D |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 19 Question Id : 7495721389 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

BSNT : YXGC :: MXRV : ? :: FPCY : CUVH

- | | |
|----------|----------|
| (1) JDKE | (2) JCKD |
| (3) JCKE | (4) JCLE |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 20 Question Id : 7495721390 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

A cube is painted black on two adjacent faces and on one apposite face, yellow on two apposite faces and green on the remaining face. It is then cut into 64 equal cubes. How many cubes have one black coloured face only?

- | | |
|--------|--------|
| (1) 12 | (2) 24 |
| (3) 16 | (4) 8 |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 21 Question Id : 7495721391 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In the given question, two statements are given followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance from the commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements : All Hammers are pliers. All screws are pliers.

Conclusions I : Some hammers are screws.

II : Some screws are hammers is a possibility.

- (1) Both Conclusions I and II follow
- (2) Both Conclusions I and II do not follow
- (3) Conclusion I follows but conclusion II does not follow
- (4) Conclusion I does not follow but conclusion II follows

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 22 Question Id : 7495721392 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In this question there is a statement followed by two assumptions numbered I and II. You have to consider the statement and the following assumptions and decide which of the assumption(s) is/are implicit in the statement.

Statement : Rohan always studies from the reference books of publication X for his competitive exams.

Assumptions I : Many of the questions asked in competitive exams are from the reference books of publication X.

II : Studying from reference books are necessary for competitive exams.

- (1) Only Assumption I is implicit
- (2) Only Assumption II is implicit
- (3) Neither assumption I nor II is implicit
- (4) Both assumptions I and II are implicit

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 23 Question Id : 7495721393 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Following table provides the marks obtained by four friends in five different subjects. Maximum marks in each subject are 100.

Friends	Physics	Chemistry	Mathematics	English	Physical Education
Rahul	89	92	79	81	90
Vinay	75	96	85	86	92
Abeer	94	90	89	77	90
Sudesh	93	91	84	86	92

Who has scored exactly 88% marks in total?

- (1) Rahul
- (2) Vinay
- (3) Abeer
- (4) Sudesh

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 24 Question Id : 7495721394 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In this question there is a statement, followed by two courses of action numbered I and II. You have to assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing.

Statement : A large number of people got ill due to eating cut fruits from road side shops.

Courses of Action I. Municipal corporation should penalize the road side vendors if they sell cut fruits.

II. People should be made aware about the dangers of eating cut fruits sold in open.

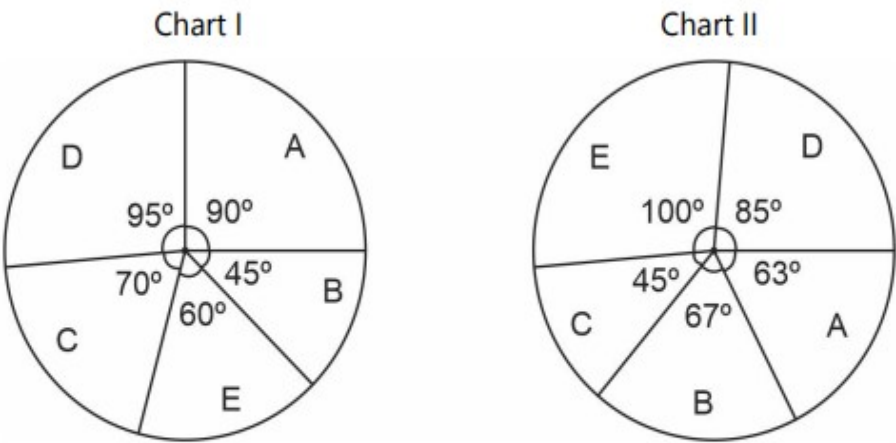
- (1) Only I follows
- (2) Only II follows
- (3) Neither I nor II follows
- (4) Both I and II follow

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 25 Question Id : 7495721395 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The following pie chart show the distribution of students appearing in the Board examination (Chart I) and the students who have passed the Board examination (Chart II) from the different schools A, B, C, D and E.



Total number of students appeared = 1800

Which school has the lowest percentage of students passed with respect to those appeared?

- (1) A

(2) B
- (3) C

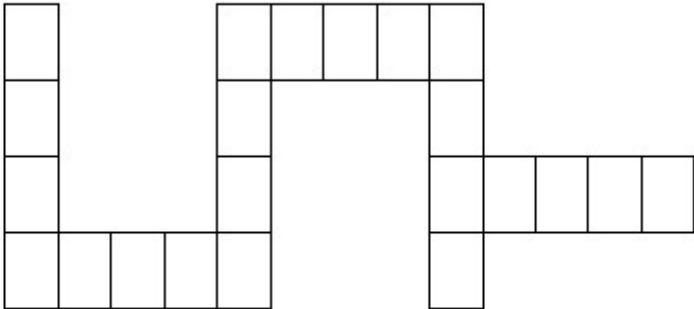
(4) D

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 26 Question Id : 7495721396 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

How many rectangles are there in the given figure?



- (1) 65

(2) 70
- (3) 75

(4) 80

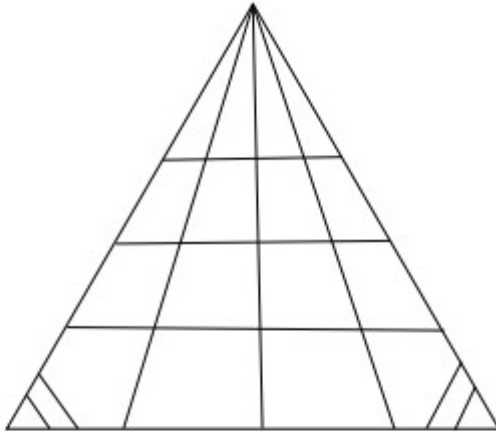
Options :

1. 1

- 2. 2
- 3. 3
- 4. 4

Question Number : 27 Question Id : 7495721397 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

How many triangles are there in the given figure?



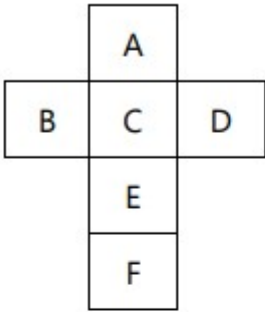
- | | |
|--------|--------|
| (1) 26 | (2) 34 |
| (3) 44 | (4) 46 |

Options :

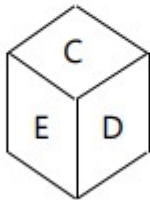
- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 28 Question Id : 7495721398 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

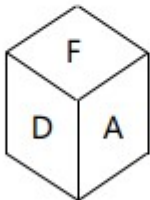
Select the box that cannot be formed by folding the given unfolded box.



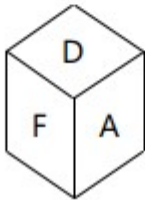
(1)



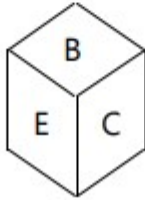
(2)



(3)



(4)

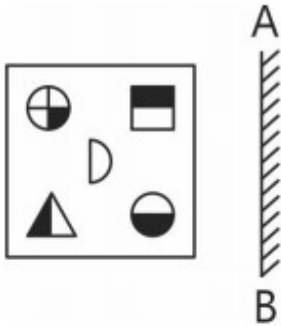


Options :

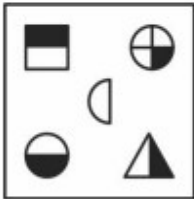
- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 29 Question Id : 7495721399 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

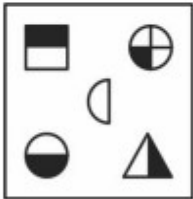
Choose the correct mirror image of the given figure when the mirror is placed at line AB.



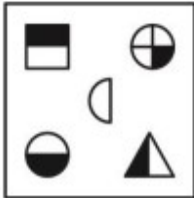
(1)



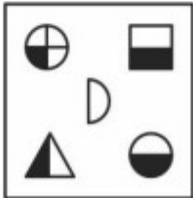
(2)



(3)



(4)

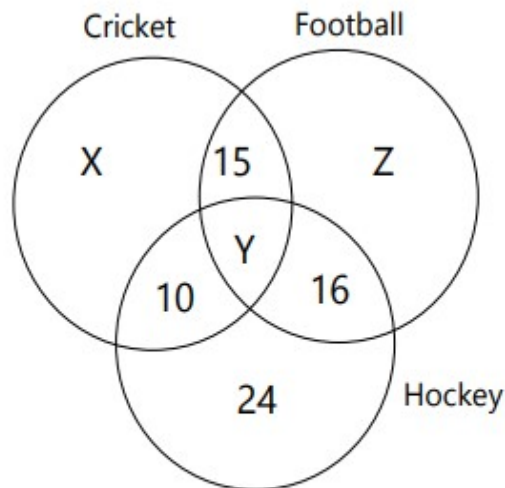


Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 30 Question Id : 7495721400 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Study the Venn diagram and answer the question. The alphabets and numbers in different sections indicate the number of persons who play different games in a school.



If the total number of persons who play games in the school is 108 and the number of persons who play at least two games is 54, find the number of persons who play all the three games.

- | | |
|--------|--------|
| (1) 11 | (2) 13 |
| (3) 19 | (4) 21 |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 31 Question Id : 7495721401 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

If 'AMAN' is written as 'CLCM' in a certain code then in the same code 'ARUN' is written as

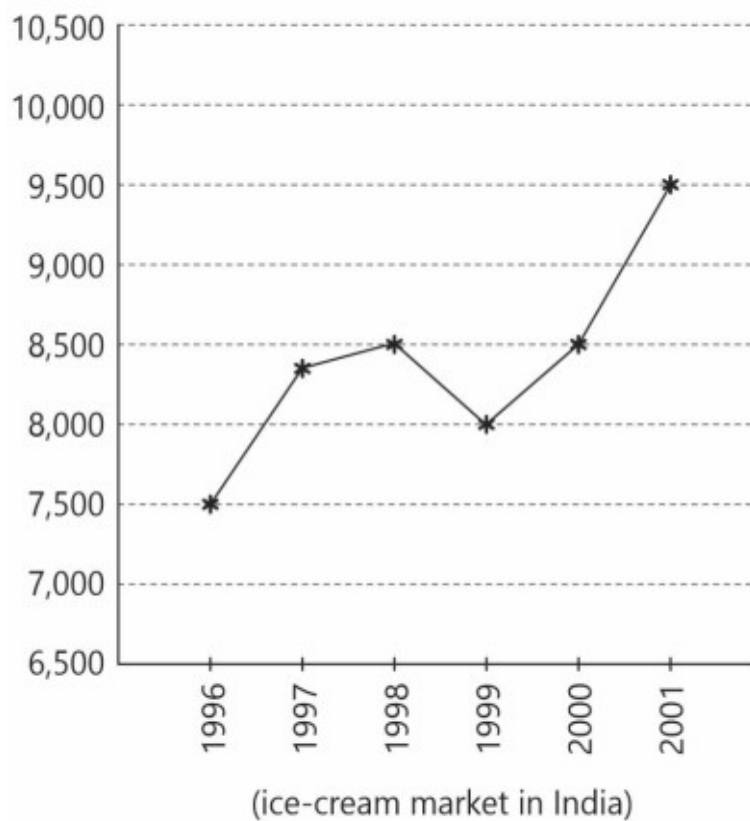
- | | |
|----------|----------|
| (1) CQWO | (2) CQVM |
| (3) CPWM | (4) CQWM |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 32 Question Id : 7495721402 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Direction : Refer the chart below and answer the question. What is annual average rate of increase in the ice-cream market from 1996 to 2001?



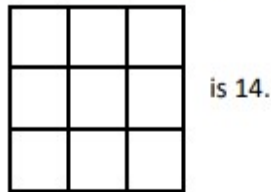
- | | |
|-----------|------------|
| (1) 5.33% | (2) 26.67% |
| (3) 6.67% | (4) 10% |

Options :

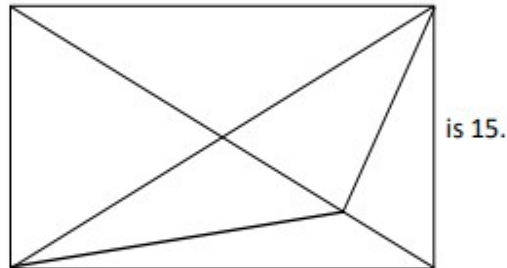
1. 1
2. 2
3. 3
4. 4

Question Number : 33 Question Id : 7495721403 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Statement I : The number of squares in the figure.



Statement II : The number of triangles in the figure.



In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but statement II is false
- (4) Statement I is false but statement II is true

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 34 Question Id : 7495721404 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Statement I : The mirror-image of U T Z F Y 6 K H is H K Ø Y J Σ T U.

Statement II : The water-image of D 6 Z 7 F 4 is D Ø Σ Δ E ¶.

In the light of above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but statement II is false
- (4) Statement I is false but statement II is true

Options :

- 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Number : 35 Question Id : 7495721405 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

If ‘-’ means ‘÷’ means ‘+’ means ‘×’, ‘÷’ means ‘-’, ‘×’ means ‘+’, then which of the following equations is correct?

- (1) $52 \div 4 + 5 \times 8 - 2 = 36$
- (2) $43 \times 7 \div 5 + 4 - 8 = 25$
- (3) $36 \times 4 - 12 + 5 \div 3 = 420$
- (4) $36 - 12 \times 6 \div 3 + 4 = 60$

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 36 Question Id : 7495721406 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Complete the figure matrix.

↑ ↑	↑ ↓	↓ ↑
↑ →	↑ ←	↓ →
↑ ↓	?	↓ ↓

- (1)

↑

↑
- (2)

↓

↑
- (3)

↑

↓
- (4)

↑

→

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 37 Question Id : 7495721407 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

A cube whose two adjacent faces are coloured is cut into 64 identical small cubes.
How many of these small cubes are not coloured at all?

- | | |
|--------|--------|
| (1) 60 | (2) 48 |
| (3) 36 | (4) 32 |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 38 Question Id : 7495721408 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

A dealer marks his goods at 20% above the cost price and allows a discount of 16% on the marked price. What is his gain percentage?

- | | |
|----------|-----------|
| (1) 1% | (2) 2% |
| (3) 0.8% | (4) 0.08% |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 39 Question Id : 7495721409 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

If $2a = 3b = 4c = 6d$, then value of $\frac{a^2 + b^2}{c^2 + d^2}$, is :

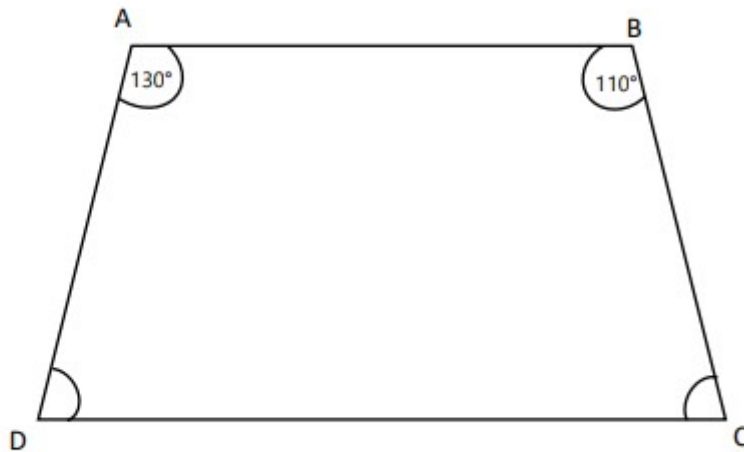
- | | |
|-------------------|-------------------|
| (1) $\frac{2}{3}$ | (2) 4 |
| (3) $\frac{1}{6}$ | (4) $\frac{7}{3}$ |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 40 Question Id : 7495721410 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In trapezium $ABCD$, in which $AB \parallel DC$,



$\angle A = 130^\circ$ and $\angle B = 110^\circ$. What is the value of $\angle C - \angle D$?

- | | |
|-----------------|----------------|
| (1) 10° | (2) 20° |
| (3) -20° | (4) 40° |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 41 Question Id : 7495721411 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In a town, 65% people watched the news on television, 40% read a newspaper and 25% read a newspaper and watched the news on television also. What percent of the people neither watched the news on television nor read a newspaper?

- | | |
|--------|--------|
| (1) 10 | (2) 14 |
| (3) 16 | (4) 20 |

Options :

1. 1
2. 2
3. 3

4. 4

Question Number : 42 Question Id : 7495721412 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

- (A) The missing term of the series
4, 8, 28, 80, 244, ? , is 728.
- (B) The missing term of the alphabet series
UPI, SHJ, ODP, MBQ, ? is IAV.
- (C) The missing term of the letter – number series
Q1F, S2E, U6D, W21C, ? is Y88B.
- (D) The missing term of the letter – number series
D–4, F–6, H–8, J–10, ? is L–22

Choose the correct answer from the options given below :

- (1) (A) and (C) only
- (2) (A), (B) and (C) only
- (3) (B), (C) and (D) only
- (4) (B) and (D) only

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 43 Question Id : 7495721413 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The ratio of the ages of man and his wife is 4 : 3. After 4 years, this ratio will be 9 : 7. If at the time of their marriage, the ratio of their ages was 5 : 3, then how many years ago were they married?

- | | |
|--------|--------|
| (1) 8 | (2) 10 |
| (3) 12 | (4) 15 |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 44 Question Id : 7495721414 Question Type : MCQ Option Shuffling : No

Correct Marks : 1 Wrong Marks : 0.25

Read the following information and answer the question :

Alka is older than Mala. Gopal is older than Mala but younger than Alka. Kapil is younger than Ram and Mala. Mala is older than Ram.

- (A) Mala's age is between Gopal and Ram.
- (B) Gopal age is between Mala and Kapil.
- (C) Mala lies in the middle.
- (D) Alka is the youngest.
- (E) Kapil is the eldest.

Choose the correct answer from the options given below :

- (1) (C) and (E) only
- (2) (B), (D) and (E) only
- (3) (A), (C) and (D) only
- (4) (A) and (C) only

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 45 Question Id : 7495721415 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Direction : Study the table carefully and answer the question :

Number of washing machines and refrigerators manufactured by a company.

	2005	2006	2007	2008	2009
Washing machine	14400	20500	12800	16400	18600
Refrigerator	12800	24700	19200	20200	14900

Find, what was the difference in the total number of washing machines and refrigerators manufactured in 2006 to the total number of washing machines and refrigerators manufactured in 2008?

- (1) 6,800
- (2) 5,600
- (3) 8,600
- (4) 8,200

Options :

- 1. 1
- 2. 2

3. 3

4. 4

Question Number : 46 Question Id : 7495721416 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : A compound interest on a certain sum for 2 years at 10% per annum is ₹ 525. The simple interest on the same sum for double the time at half the rate percent per annum is ₹ 500.

Statement II : The respective ratio of milk and water in the mixture is 4 : 3. If 6 litres of water is added to this mixture, the respective ratio of milk and water becomes 8 : 7, then the quantity of milk in the original mixture is 24 litres.

In the light of the above statements, choose the most appropriate answer from the options :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but statement II is incorrect
- (4) Statement I is incorrect but statement II is correct

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 47 Question Id : 7495721417 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

If $x + \frac{1}{x} = 10$, then what is the value of $\left(x^2 - \frac{1}{x^2}\right)^2$?

- | | |
|-----------|-----------|
| (1) 9,600 | (2) 9,604 |
| (3) 9,608 | (4) 9,610 |

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 48 Question Id : 7495721418 Question Type : MCQ Option Shuffling : No

Correct Marks : 1 Wrong Marks : 0.25

A sector of a circle of radius 6 cm is formed with central angle 60° . What will be its area (in cm^2)? (Here ' π ' refers to $\frac{22}{7}$)

(1) $\frac{3}{4}\pi$

(2) $\frac{5}{4}\pi$

(3) 6π

(4) 12π

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 49 Question Id : 7495721419 Question Type : MCQ Option Shuffling : No

Correct Marks : 1 Wrong Marks : 0.25

How many four digit numbers can be formed by using the digits 0, 1, 3, 7 if repetition of digits are allowed?

(1) 160

(2) 500

(3) 2400

(4) 2500

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 50 Question Id : 7495721420 Question Type : MCQ Option Shuffling : No

Correct Marks : 1 Wrong Marks : 0.25

What is the difference between simple interest and compound interest on sum ₹ 10,000 at the rate of 10% per annum for the period of two years?

(1) ₹ 110

(2) ₹ 100

(3) ₹ 150

(4) ₹ 160

Options :

1. 1
2. 2
3. 3
4. 4

Section B Cross Disciplinary

Section Id :	74957229
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	50
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	74957249
Question Shuffling Allowed :	Yes

Question Number : 51 Question Id : 7495721421 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

A short microtubular organelle projecting into extra cellular medium used for locomotion

- | | |
|------------------|----------------|
| (1) Cisternae | (2) Cilium |
| (3) Pesudopodium | (4) Basal Body |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 52 Question Id : 7495721422 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Organelle that is involved in carbohydrate digestion, autophagy, hydrolysis etc.

- | | |
|----------------|------------------|
| (1) Golgi body | (2) Nucleus |
| (3) Lysosome | (4) Mitochondria |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 53 Question Id : 7495721423 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Microtubular protein having ATPase activity and required for movement

- | | |
|--------------|-----------------|
| (1) Ecdysone | (2) Fibronectin |
| (3) Dynein | (4) Sarcopin |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 54 Question Id : 7495721424 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following principle of bioethics emphasizes the importance of minimizing harm and maximizing benefits in health care decisions?

- | | |
|-----------------|---------------------|
| (1) Justice | (2) Autonomy |
| (3) Beneficence | (4) Non-maleficence |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 55 Question Id : 7495721425 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following ethical principle supports the idea that health care resources should be distributed fairly among individuals and communities?

- | | |
|---------------------|----------------------|
| (1) Confidentiality | (2) Informed consent |
| (3) Justice | (4) Beneficence |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 56 Question Id : 7495721426 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I	List II
(A) Released by anterior pituitary and affects the adrenal gland	(I) FSH
(B) Influences extracellular fluid volume	(II) Oxytocin
(C) Stimulates estrogen secretion and egg maturation in females	(III) ADH
(D) Causes uterine contractions during child birth	(IV) ACTH

Choose the correct options given below :

- (1) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)
- (2) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (3) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
- (4) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 57 Question Id : 7495721427 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : An endocrine gland releases substances through tubes or ducts.

Statement II : An exocrine gland releases substances it makes directly into the fluid bathing the glands.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but statement II is false
- (4) Statement I is false but statement II is true

Options :

- 1. 1
- 2. 2

3. 3

4. 4

Question Number : 58 Question Id : 7495721428 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I	List II
(A) Mechanoreceptor	(I) Detects change in water volume of a solution
(B) Nociceptor	(II) Responds to heat or cold
(C) Osmoreceptor	(III) Detects tissue damage
(D) Thermoreceptor	(IV) Detects changes in pressure, position or acceleration

Choose the correct answer from the options given below :

- (1) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (2) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
- (3) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
- (4) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 59 Question Id : 7495721429 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following connective tissues has a matrix of collagen and elastin fibres in a rubbery ground substance?

- | | |
|---------------|-----------|
| (1) Adipose | (2) Bone |
| (3) Cartilage | (4) Blood |

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 60 Question Id : 7495721430 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

All of the following acts as anaphylotoxins EXCEPT

- | | |
|---------|---------|
| (1) C3a | (2) C4a |
| (3) C5a | (4) C6a |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 61 Question Id : 7495721431 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The mechanism by which B cells ensure that only one heavy and one light chain allele is translated is referred to as

- | | |
|------------------------|-------------------------|
| (1) Co-dominance | (2) Allelic exclusion |
| (3) Isotypic selection | (4) Idiotypic selection |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 62 Question Id : 7495721432 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements regarding Major Histocompatibility Complex (MHC).

Statement I : MHC I contains two different polypeptide chains – α chain and β chain.

Statement II : MHC I is present on all nucleated cells.

In the light of the above two statements, select the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Statement I is correct but Statement II is incorrect
- (3) Statement I is not correct but Statement II is correct
- (4) Both Statement I and Statement II are not correct

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 63 Question Id : 7495721433 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The function of the 3' to 5' exonuclease activity of a DNA polymerase is to :

- (1) Remove the 5' end of the polynucleotide strand that is attached to the template strand that is being copied
- (2) Remove incorrect nucleotides from the newly synthesized strand of DNA
- (3) Remove damaged nucleotide from the template strand during DNA synthesis
- (4) Remove nucleotides from the ends of DNA molecules to ensure the generation of blunt ends

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 64 Question Id : 7495721434 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Identify which of the following tests is the most convincing to identify a gene as oncogene or tumor suppressor gene.

- (1) Transgenic mice overexpressing the candidate oncogene and knock-out mice lacking the candidate tumor suppressor gene
- (2) Transgenic mice overexpressing the candidate tumor suppressor gene and knock-out mice lacking the candidate oncogene
- (3) Transgenic mice that overexpresses the candidate oncogene and tumor suppressor gene
- (4) Knockout mice that lacks the candidate oncogene and tumor suppressor gene

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 65 Question Id : 7495721435 Question Type : MCQ Option Shuffling : No
Correct Marks : 1 Wrong Marks : 0.25

A study is done on a mammalian cell line that has a doubling time of 24 hours. These cells are synchronized in G1 and then labeled for 2 days with BrdU (an analog of thymidine). At the end of labeling period, chromosomal DNA is isolated from the cells and its density analyzed by equilibrium centrifugation in cesium chloride gradients. Which of the following patterns would be expected to be seen? (H = heavy, L = light)

- | | |
|-----------------------|----------------------|
| (1) 100% H/H | (2) 100% H/L |
| (3) 50%, H/H, 50% H/L | (4) 50% H/H, 50% L/L |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 66 Question Id : 7495721436 Question Type : MCQ Option Shuffling : No
Correct Marks : 1 Wrong Marks : 0.25

Identify the correct order in which extra-cellular signals are transmitted.

- (A) Adenylate cyclase
- (B) cAMP
- (C) Protein kinase A

Choose the correct answer from the options given below :

- | | |
|-------------------|-------------------|
| (1) (A), (B), (C) | (2) (C), (B), (A) |
| (3) (A), (C), (B) | (4) (B), (C), (A) |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 67 Question Id : 7495721437 Question Type : MCQ Option Shuffling : No
Correct Marks : 1 Wrong Marks : 0.25

Which of the following is not a function of the lysosomes?

- (1) Engulf worn-out components of the cells
- (2) Engulf exogeneous substances
- (3) Suicidal bags
- (4) Power generating units

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 68 Question Id : 7495721438 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : In Anaphase I, homologous chromosomes separate which sister chromatids remain together.

Statement II : In Anaphase II, chromosomes line up along the metaphase plate.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 69 Question Id : 7495721439 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The function of the hepatic portal circulation is to :

- (1) carry toxins to the venous system for disposal through the urinary tract
- (2) hormone distribution
- (3) collect absorbed nutrients for metabolic processing or storage
- (4) transfer bile to the liver from the pancreas

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 70 Question Id : 7495721440 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following statements is incorrect?

- (1) Aldosterone stimulates the reabsorption of Na^+
- (2) Aldosterone affects water resorption
- (3) Aldosterone is made in the hypothalamus and released from the anterior pituitary
- (4) Aldosterone stimulates the secretion of K^+

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 71 Question Id : 7495721441 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Regarding BLAST (Basic Local Alignment Search Tool) all the following statements are correct EXCEPT :

- (1) The tool is used to compare newly sequenced genomic DNA to known sequences stored in various databases
- (2) Once aligned the result is showed as output of three lines : Query, Sbject (Subject) and human sequence
- (3) Access to BLAST is provided by NCBI
- (4) BLAST report also provides an 'Expect' value or E value based on number of matches

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 72 Question Id : 7495721442 Question Type : MCQ Option Shuffling : No

Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements ; in which one is Assertion (A) and the other one is Reason (R) :

Assertion (A) : Cri du chat syndrome is a classical example of endopolyploidy in human.

Reasoning (R) : In Cri du chat syndrome there is partial monosomy resulting from small terminal deletion involving chromosome 5.

In the light of above statements choose the correct answer :

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is not the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 73 Question Id : 7495721443 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : The genetic code is written in linear form with three nucleotide letters, thus referred as triplet code.

Statement II : The coding system is highly variable, in different organisms one triplet code can specify different amino acids in different organisms.

In the light of the above statements, choose the correct answer from the options :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but statement II is false
- (4) Statement I is false but statement II is true

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 74 Question Id : 7495721444 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In a pedigree, the first person identified to be suffering from a genetic disease is called as :

- | | |
|----------------|----------------|
| (1) Consultant | (2) Proband |
| (3) Kindred | (4) Consultand |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 75 Question Id : 7495721445 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Two hypothetical SNPs (Single Nucleotide Polymorphism) in humans are 4 map units (m.u.) apart. The allele at SNP1 can be A or T ; the allele at SNP2 can be C or G. A male with genotype AG/TC and a female with genotype AC/AC have a child. What is the probability they have a child with genotype AG/AC?

- | | |
|---------|---------|
| (1) 96% | (2) 4% |
| (3) 48% | (4) 16% |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 76 Question Id : 7495721446 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The clover leaf structure is a unique feature of which of the following molecules?

- | | |
|-----------------------------|-----------------------------|
| (1) 28S subunit of ribosome | (2) Unspliced mRNA molecule |
| (3) Spliced tRNA molecule | (4) Pre-processed sno RNA |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 77 Question Id : 7495721447 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

An autosomal recessive condition affects 1 new born in 10,000. What is the expected frequency of carriers?

- | | |
|----------------|---------------|
| (1) 198/10,000 | (2) 99/10,000 |
| (3) 1/100 | (4) 99/100 |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 78 Question Id : 7495721448 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The Hardy Weinberg principle is integral to population genetics. All of the following options can disturb the Hardy Weinberg equilibrium EXCEPT

- | | |
|-------------------|---------------------------|
| (1) Random mating | (2) Mutation |
| (3) Gene Flow | (4) Small population size |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 79 Question Id : 7495721449 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In genetic linkage, the concept of recombination fraction is very important, of the characteristics given here, choose the correct ones.

- (A) Recombination fraction is usually designated as θ (theta)
 - (B) It is the measure of the distance separating two loci on different chromosomes
 - (C) It gives an indication of the likelihood that a cross-over will occur between the two loci
 - (D) Genes at loci are not linked then $\theta = 0.5$
 - (E) Genes at unlinked loci will segregate together during 20% of all meiosis
- | | |
|-------------------|-------------------|
| (1) (B), (C), (E) | (2) (A), (D), (E) |
| (3) (A), (C), (D) | (4) (A), (B), (C) |

Options :

- 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Number : 80 Question Id : 7495721450 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The process of genetic counselling involves various steps. These steps have been randomised and listed below. From the options given below, choose the correct sequence in which the counselling steps should be undertaken/performed.

- (A) Risk assessment
- (B) Diagnosis based on history and investigation
- (C) Long term contact and support group
- (D) Discussion of options

- (1) (B), (D), (C), (A)
- (2) (B), (A), (D), (C)
- (3) (A), (B), (C), (D)
- (4) (B), (C), (A), (D)

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 81 Question Id : 7495721451 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In which stage of the cell cycle, the cells double their amount of DNA?

- | | |
|--------------|--------------|
| (1) G1 phase | (2) G2 phase |
| (3) M phase | (4) S phase |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 82 Question Id : 7495721452 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In Eukaryotes, citric acid cycle takes place in

- | | |
|------------------|------------------|
| (1) Nucleus | (2) Cytoplasm |
| (3) Mitochondria | (4) Golgi bodies |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 83 Question Id : 7495721453 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

What is the approximate molecular mass of polypeptide containing 100 amino acid residues?

- | | |
|---------------|---------------|
| (1) 300 Da | (2) 11,000 Da |
| (3) 30,000 Da | (4) 110 Da |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 84 Question Id : 7495721454 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Human genomic DNA isolated with concentration of 400 µg/ml, needs to be digested with restriction enzyme Bam H1 (2000 U/ml). Investigator needs to set reaction with 10 µg of genomic DNA with 10 units of enzyme. How much volume (in µl – micro litre) needs to be drawn from the two stock solutions respectively to get 10 µg of DNA and 10 U of enzyme?

- (1) DNA stock – 25µl Enzyme – 5 µl
- (2) DNA stock – 35µl Enzyme – 7.5 µl
- (3) DNA stock – 27.5µl Enzyme – 7.5 µl
- (4) DNA stock – 10µl Enzyme – 10 µl

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 85 Question Id : 7495721455 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match the List I with List II.

List I	List II
(A) Taq DNA polymerase	(I) used to make cDNA
(B) MMLV Reverse Transcriptase	(II) used to phosphorylate oligos or DNA
(C) RNA polymerase II	(III) used to amplify DNA
(D) T ₄ polynucleotide kinase	(IV) Transcription particularly of mRNA, LncRNA

Choose the correct options given below :

- (1) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (2) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (3) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (4) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 86 Question Id : 7495721456 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Select the correct primer pair of forward and reverse primer sequence that amplify full length of sequence given below :

5' – TAC TAT CGA GTA CTA GAC TAC TAAGT 1 – 100 – 1 ACT, AGA, CGT ACG, TAG, TAC, GTT ACT AC – 3'

- (1) 5' – ATG ATA GCT CAT GAT CTG AT – 3' Forward
5' – GTA GTA ACG TAC TAC GTA CG – 3' Reverse
- (2) 5' – TAC TAT CGA GTA CTA GAC TA – 3' Forward
5' – GTA GTA ACG TAC TAC GTA CG – 3' Reverse
- (3) 5' – ATG ATA GCT CAT GAT CTG AT – 3' Forward
5' – GCA TGC ATC ATG CAA TGA TG – 3' Reverse
- (4) 5' – TAG TCT AGT ACT CGA TAG TA – 3' Forward
5' – GCA TGC ATC ATG CAA TGA TG – 3' Reverse

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 87 Question Id : 7495721457 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

_____ variant of BLAST, compares a DNA query sequence to the protein database.

- | | |
|-------------|-------------|
| (1) BLASTP | (2) BLASTX |
| (3) BLAST N | (4) TBLASTN |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 88 Question Id : 7495721458 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which one of the following is not a primary database?

- | | |
|------------------|--------------|
| (1) SWISS – PROT | (2) EMBL |
| (3) DDBJ | (4) Gen Bank |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 89 Question Id : 7495721459 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The computational approaches to predict the three-dimensional structures of proteins are :

- (A) Homology modeling
- (B) X-ray crystallography
- (C) NMR
- (D) Threading
- (E) Ab-initio

Choose the correct answer from the options given below:

- (1) (A) only
- (2) (B) and (C) only
- (3) (A), (D) and (E) only
- (4) (C) only

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 90 Question Id : 7495721460 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

What happens to transferrin when iron is bound to it and it interacts with its receptor?

- (1) It is degraded inside the lysosome
- (2) Undergoes a conformational change allowing binding to its receptor
- (3) It is converted to apotransferrin
- (4) Permanently internalized and degraded

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 91 Question Id : 7495721461 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which non-viral gene delivery method utilizes physical forces to introduce genetic material into cells?

- | | |
|---------------------|---------------------|
| (1) Liposomes | (2) Poly (L-lysine) |
| (3) Electroporation | (4) Adenoviruses |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 92 Question Id : 7495721462 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which protein is responsible for cleaving double stranded RNA into smaller fragments during RNA interference?

- | | |
|------------|--------------|
| (1) Slicer | (2) Helicase |
| (3) RISC | (4) Dicer |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 93 Question Id : 7495721463 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

What is the main advantage of using Short Tandem Repeats (STRs) over restriction fragment length polymorphism (RFLP) in DNA fingerprinting?

- (1) STRs are easier to visualize on a gel
- (2) STRs requires less DNA and are more resistant to degradation
- (3) STRs produce more distinct band pattern
- (4) STRs are less expensive to analyze

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 94 Question Id : 7495721464 Question Type : MCQ Option Shuffling : No

Correct Marks : 1 Wrong Marks : 0.25

Which of the following steps in PCR is responsible for separating double-stranded DNA into single strands?

- | | |
|---------------|----------------|
| (1) Annealing | (2) Extension |
| (3) Melting | (4) Elongation |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 95 Question Id : 7495721465 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match the following :

List I	List II
(A) Autotroph	(I) Macro consumers
(B) Phagotrops	(II) Micro consumers
(C) Saprotrops	(III) Primary producers
(D) Heliotrophs	(IV) Sun loving plants

Choose the correct answer from the options given below :

- (1) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)
- (2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (3) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
- (4) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 96 Question Id : 7495721466 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

The reductive pentose phosphate pathway is also known as

- (A) Photosynthetic Carbon Oxidation cycle (PCO)
- (B) Calvin – Benson cycle
- (C) Photorespiration
- (D) C4 cycle

Choose the correct answer from the options given below :

- (1) Both (A) and (B) are correct
- (2) Both (B) and (C) are correct
- (3) (B) only
- (4) (C) only

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 97 Question Id : 7495721467 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Cortisones, used in the treatment of rheumatoid arthritis, are produced from fermentation of _____ by *Rhizopus migrans*.

- | | |
|-----------------|------------|
| (1) Amino acids | (2) Lipids |
| (3) Glycosides | (4) Starch |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 98 Question Id : 7495721468 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In cell cycle there are 4 stages. M, G1, S and G2. There is another term commonly used ; G0 phase. Choose the best described statement for this G0 phase.

- (1) Cells are at growing stage
- (2) Cells are at the stage of differentiation
- (3) Cells have ceased to divide
- (4) Cells are about to double

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 99 Question Id : 7495721469 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Based on series of events outlined in Central Dogma, there are enzymes that convert from one stage to the other. However, one conversion is not possible yet. Identify the stage :

- | | |
|----------------|--------------------|
| (1) DNA to RNA | (2) Protein to RNA |
| (3) DNA to DNA | (4) RNA to DNA |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 100 Question Id : 7495721470 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In lactose operon, the following events happen.

- (A) The operon is normally in an "off" mode when appropriate substrate is absent.
- (B) Lactose is an inducer substrate.
- (C) If lactose is added to the cell's environment, it triggers events that turn the operator "on".
- (D) The structural genes are transcribed in 3 different transcripts coding for all three different enzymes.
- (E) As lactose is depleted, operon is repressed.

Which of the answers is correct?

- | | |
|-------------------|-------------------|
| (1) (A), (B), (C) | (2) (B), (C), (D) |
| (3) (A), (D), (E) | (4) (C), (D), (E) |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Section C Pharmacology

Section Id :	74957230
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	50
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	74957250
Question Shuffling Allowed :	Yes

Question Number : 101 Question Id : 7495721471 Question Type : MCQ Option Shuffling : No
Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I (Target antibody)	List II (Uses)
(A) HER-2	(I) Arthritis
(B) EGFR	(II) Colorectal Cancer
(C) TNF-Alpha	(III) Non-Hodgkin lymphoma
(D) CD 20	(IV) Breast Cancer

Choose the correct options given below :

- (1) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
- (2) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (4) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 102 Question Id : 7495721472 Question Type : MCQ Option Shuffling : No
Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I (Polymer)	List II (Characteristics)
(A) Methyl cellulose	(I) Water insoluble
(B) Ethyl cellulose	(II) Water soluble
(C) Carboxyl methyl cellulose	(III) Soluble in water and in alcohol
(D) Hydroxyl ethyl cellulose	(IV) Soluble in cold water only

Choose the correct options given below :

- (1) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
- (2) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)
- (3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (4) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 103 Question Id : 7495721473 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : PEGylation reduces the plasma clearance of proteins by reducing their metabolic degradation and receptor mediated uptake from systemic circulation.

Statement II : PEGylation improves the safety profile by shielding antigenic and immunogenic epitopes.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

1. 1
2. 2
3. 3

Question Number : 104 Question Id : 7495721474 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I	List II
(A) The Hammett σ values	(I) Effect of substituent on the refractive index for compound and is a parameter of dispersion interactions
(B) The Taft E_s values	(II) Logarithm of the effect of the substituent on the acid dissociation constant
(C) The Hansch π values	(III) Effect of a given substituent on log P
(D) Molar refractivity	(IV) Proportional to the radius of spherically symmetric substituents

Choose the correct options given below :

- (1) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)
- (4) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 105 Question Id : 7495721475 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following properties of thiopentone sodium makes it suitable as an inducing agent in general anesthesia?

- | | |
|----------------------|----------------------------|
| (1) Bioavailability | (2) Redistribution |
| (3) Plasma half-life | (4) Volume of distribution |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 106 Question Id : 7495721476 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following consists of an outer uni or multi laminar membrane and an inner liquid core?

- | | |
|-------------------|--------------|
| (1) Microparticle | (2) Emulsion |
| (3) Liposome | (4) Micelle |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 107 Question Id : 7495721477 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I	List II
(A) Atropine (<i>Atropa belladonna</i>)	(I) Gout treatment
(B) Colchicine (<i>Colchicum autumnale</i>)	(II) Alleviation of Alzheimer's disease
(C) Galantamine (<i>Narcissus</i> spp.)	(III) Laxative
(D) Sennosides (<i>Cassia senna</i>)	(IV) Antispasmodic

Choose the correct options given below :

- (1) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
- (4) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 108 Question Id : 7495721478 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Sodium meta-bisulfite is used as an antioxidant or acidic parenteral products.

Statement II : Sodium bisulfite is used in parenteral product of neutral pH and sodium sulfite is used as an antioxidant in alkali parenteral products.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 109 Question Id : 7495721479 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Bio equivalence studies between a test product and a reference product are carried by pharmacokinetic measures such as AUC, C_{max} and T_{max} .

Statement II : Pharmacodynamic studies, i.e., measurement of a pathophysiological process over time, can be used to determine bioequivalence of two different products.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3

Question Number : 110 Question Id : 7495721480 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below Assertion (A) Reasoning (R) :

Assertion (A) : Addition of polysorbate 80 to an aqueous suspension of phenacetin results in enhanced gastro-intestinal absorption of phenacetin.

Reasoning (R) : Polysorbate 80 disrupts the integrity and function of gastro intestinal barrier and tends to enhance the drug penetration.

In the light of above statements, choose the correct answer from the options given below :

- (1) Both (A) and (R) are true but (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is not the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 111 Question Id : 7495721481 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

In case of ocular drug delivery systems –

- (A) The dissolution rate of large particles is smaller than that of small particles.
- (B) Using water-soluble matrices, where the drugs is either dispersed or dissolved, increases the precorneal retention and duration of action.
- (C) The delivery of drugs from hydrophilic matrices is slow in ocular drug delivery systems
- (D) The prolonged action is not controlled by the vehicle but by the precorneal retention of drug.
- (E) The penetration of water into the matrix can be reduced by hydrophobic polymers.

Choose the correct answer from the options given below :

- (1) (A), (B), (C), (D) only
- (2) (A), (B), (E) only
- (3) (A), (C), (E) only
- (4) (C), (D), (E) only

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 112 Question Id : 7495721482 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following statements is true about drugs having a large V_d ?

- (1) Have short half life
- (2) Attain high plasma concentration rapidly
- (3) Require a loading dose
- (4) Easily removed by haemodialysis

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 113 Question Id : 7495721483 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following statements is true about 5% W/V glucose?

- (1) Each 1000 ml contains 5 gm of glucose
- (2) Each 100 ml contains 5 gm of glucose
- (3) Each 1000 ml contains 5 mg of glucose
- (4) Each 100 ml contains 5 mg of glucose

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 114 Question Id : 7495721484 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below Assertion (A) Reasoning (R) :

Assertion (A) : Compared to oral route, intravenous administration leads to faster onset of action of a drug

Reasoning (R) : AUC of the drug by the intravenous route will be higher to oral route if the drug is not completely absorbed orally.

In the light of above statements, choose the correct answer from the options given below :

- (1) Both (A) and (R) are correct but (R) is the correct explanation of (A)
- (2) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 115 Question Id : 7495721485 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Oral bisphosphate was prescribed to Mrs. Renu, a 65 year old female, for treatment of osteoporosis. The doctor instructed her to take the tablet of alendronate once a week in the morning in empty stomach with one full glass of water. The doctor also instructed her not to lie down or take any food for atleast next 30 minutes.

The reason for such a advice was :

- (1) Alendronate requires large amount of water to get dissolved and subsequently get completely absorbed from oral route
- (2) To prevent contact with oesophageal mucosa to prevent oesophagitis, erosion or ulcer of oesophagus
- (3) To promote metabolism and subsequent excretion
- (4) Extra water will help to generate active metabolite

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 116 Question Id : 7495721486 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Isosorbide dinitrate is administered preferably by which of the following routes in a patient suffering from an acute attack of angina pectoris?

- | | |
|------------------------|----------------------|
| (1) Inhalational route | (2) Sublingual route |
| (3) Oral route | (4) Rectal route |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 117 Question Id : 7495721487 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I (Drugs)	List II (Action)
(A) Prazosin	(I) $\beta_1 + \beta_2$ blockade
(B) Propranolol	(II) $\alpha_1 + \alpha_2$ blockade
(C) Phentolamine	(III) β_1 blockade
(D) Metoprolol	(IV) α_1 blockade

Choose the correct options given below :

- (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (2) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (4) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 118 Question Id : 7495721488 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following statements regarding β -adrenergic blocking drugs is/are true?

- (A) Propranolol is a non-selective β -blocker with intrinsic sympathomimetic activity
- (B) Carvedilol is a non-selective β -blocker with additional alpha blocking property
- (C) Nebivolol is a cardio selective β_1 blocker
- (D) Timolol is a non-selective β -blocker without intrinsic sympathomimetic activity
- (E) Esmolol is an ultra-short acting non-selective β -blocker

Choose the correct answer from the options given below:

- (1) (A), (B) and (C) only
- (2) (B), (C) and (D) only
- (3) (C), (D) and (E) only
- (4) (D) and (E) only

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 119 Question Id : 7495721489 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I: Methotrexate is a commonly used disease modifying anti-rheumatic drug which can be administered safely in patients of liver diseases

Statement II: Hydroxychloroquine can induce remission in patients of rheumatoid arthritis and has relatively low toxicity.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 120 Question Id : 7495721490 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Bromocriptine decreases prolactin release from pituitary and is a strong anti-galactopoietic.

Statement II : Bromocriptine increases growth hormone release in normal individuals.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 121 Question Id : 7495721491 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following medication can cause hyperlipidemia as an adverse effect?

- | | |
|---------------|-----------------|
| (1) Enalapril | (2) Hydralazine |
| (3) Prazosin | (4) Furosemide |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 122 Question Id : 7495721492 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I (Drug)	List II (Medicine of Action)
(A) Roxatidine	(I) Proton pump inhibition
(B) Rabeprazole	(II) Cholinergic antagonist
(C) Propantheline	(III) H ₂ receptor antagonist
(D) Misoprostol	(IV) Prostaglandin analogue

Choose the correct options given below :

- (1) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (4) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 123 Question Id : 7495721493 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I (Drug)	List II (Indication)
(A) Rasagiline	(I) Psychosis
(B) Risperidone	(II) Insomnia
(C) Moclobemide	(III) Parkinsonism
(D) Nitrazepam	(IV) Depression

Choose the correct options given below :

- (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (2) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (3) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (4) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

Options :

- 1. 1
- 2. 2
- 3. 3

4. 4

Question Number : 124 Question Id : 7495721494 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following is a known adverse effect associated with the use of fluoroquinolones?

- (1) Nephrotoxicity
- (2) Tendinitis and tendon rupture
- (3) Ototoxicity
- (4) Bone marrow suppression

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 125 Question Id : 7495721495 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Exenatide is a synthetic DPP-4 resistant analogue that activates GLP-1 receptors.

Statement II : Exenatide lowers both fasting as well as post-prandial blood glucose.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 126 Question Id : 7495721496 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following drug is most suitable for a patient of Alzheimer's disease?

- | | |
|----------------|-------------------|
| (1) Donepezil | (2) Physostigmine |
| (3) Fluoxetine | (4) Mirtazapine |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 127 Question Id : 7495721497 Question Type : MCQ Option Shuffling : No

Correct Marks : 1 Wrong Marks : 0.25

Which of the following antimalarial drugs is used for the radical cure of Plasmodium vivax and Plasmodium ovale malaria?

- | | |
|-----------------|------------------|
| (1) Chloroquine | (2) Mefloquine |
| (3) Primaquine | (4) Lumefantrine |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 128 Question Id : 7495721498 Question Type : MCQ Option Shuffling : No

Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Methotrexate is a folic acid analogue which acts by inhibiting dihydrofolate reductase .

Statement II : The toxicity of methotrexate can be overcome by folic acid.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

1. 1
2. 2

3. 3

4. 4

Question Number : 129 Question Id : 7495721499 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Bortezomib is monoclonal antibody that binds to CD20 B-cell antigen expressed on surface of β lymphocytes.

Statement II : Bortezomib is primarily indicated in the treatment of multiple myeloma.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 130 Question Id : 7495721500 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following antifungal agent is used in the treatment and secondary prophylaxis of Cryptococcal meningitis?

- | | |
|------------------|-----------------|
| (1) Griseofulvin | (2) Terbinafine |
| (3) Fluconazole | (4) Caspofungin |

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 131 Question Id : 7495721501 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Essential medicines are those that satisfy the priority health care needs of majority of the population.

Statement II : The essential medicines list has to be the same in all the states of a country.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 132 Question Id : 7495721502 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following statements regarding bisphosphonates are/is correct?

- (A) Bisphosphonates are indicated as a non-hormonal therapy for osteoporosis in post-menopausal women
- (B) Alendronate, risedronate and zoledronate are examples of bisphosphonates
- (C) Bisphosphonates are also useful for the treatment of hypercalcemia associated with malignancy for Paget's disease
- (D) Esophageal irritation is a common side effect of oral bisphosphonates
- (E) Prolonged use can result in occurrence of subtrochanteric femur fractures

Choose the correct answer from the options given below :

- (1) (A), (B) and (E) only
- (2) (A), (B), (C) and (D) only
- (3) (A), (B), (C), (D) and (E)
- (4) (A), (B) and (D) only

Options :

- 1. 1
- 2. 2
- 3. 3

4. 4

Question Number : 133 Question Id : 7495721503 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

'Red man syndrome' due to release of histamine by direct action on mast cells may occur due to rapid intravenous infusion of which of the following anti-microbial agents?

- | | |
|-----------------|----------------|
| (1) Clindamycin | (2) Amikacin |
| (3) Televancin | (4) Vancomycin |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 134 Question Id : 7495721504 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Agranulocytosis is common disturbing side effect of which of the following antipsychotic drugs?

- | | |
|------------------|-----------------|
| (1) Aripiprazole | (2) Risperidone |
| (3) Clozapine | (4) Ziprasidone |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 135 Question Id : 7495721505 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Naloxone is a non-selective antagonist of opioid receptors.

Statement II : Naloxone reverses the acute effects of opioids but can precipitate severe abstinence syndrome.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 136 Question Id : 7495721506 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Febuxostat is a potent and selective non-purine inhibitor of xanthine oxidase used to treat chronic hyperuricemia in gout patients.

Statement II : Febuxostat appears safe in patient with moderate chronic kidney disease.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 137 Question Id : 7495721507 Question Type : MCQ Option Shuffling : No

Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I (Class)		List II (Drugs)	
(A)	Nucleoside/Nucleotide reverse transcriptase inhibitor	(I)	Enfuvirtide
(B)	Non-nucleoside reverse transcriptase inhibitors	(II)	Abacavir
(C)	Protease inhibitor	(III)	Efavirenz
(D)	Fusion inhibitor	(IV)	Atazanavir

Choose the correct options given below :

- (1) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (2) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
- (3) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (4) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 138 Question Id : 7495721508 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following antiviral agents is used in influenza?

- | | |
|-----------------|------------------|
| (1) Oseltamivir | (2) Valacyclovir |
| (3) Cidofovir | (4) Entecavir |

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 139 Question Id : 7495721509 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following drugs is a dual PPAR α and PPAR γ agonist approved in India for diabetic dyslipidaemia and hyper-triglyceridaemia?

- | | |
|------------------|--------------------|
| (1) Saroglitazar | (2) Nicotinic acid |
| (3) Gemfibrozil | (4) Bezafibrate |

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 140 Question Id : 7495721510 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following test used for screening for drugs influencing learning and memory?

- (1) Step through test in rodents
- (2) Compulsive gnawing test in mice
- (3) Apomorphine induced hypothermia in mice
- (4) Amphetamine stereotypy in rats

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 141 Question Id : 7495721511 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

During the isolation of opium alkaloid from the air-dried milky exudates of unripe capsules of *Papaver somniferum*

- (1) Papaverine is collected in filtrate after treatment with 10% NaOH
- (2) Narcotine is present in filtrate
- (3) Morphine is collected in aqueous layer when filtrate is extracted with chloroform
- (4) Codeine is collected in aqueous layers when filtrate is extracted with chloroform

Options :

1. 1
2. 2

3. 3

4. 4

Question Number : 142 Question Id : 7495721512 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I	List II
(A) Hager's reagent	(I) Potassium Bismuth iodide solution
(B) Dragendorff's reagent	(II) Potassium mercuric iodide solution
(C) Wagner's reagent	(III) Saturated solution of picric acid
(D) Mayer's reagent	(IV) Solution of iodine in potassium iodide

Choose the correct options given below :

- (1) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)
- (4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 143 Question Id : 7495721513 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Colchicine is an alkaloid obtained from *Colchicum autumnale* used in the treatment of chronic gouty arthritis

Statement II : Colchicine is neither analgesic nor anti-inflammatory, but is specifically suppress gouty inflammation.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 144 Question Id : 7495721514 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I (Plant species)	List II (Active compound)
(A) Coptis japonica	(I) Morphine
(B) Digitalis purpurea	(II) Psoralen
(C) Papaver somniferum	(III) Berberine
(D) Ruta graveolens	(IV) Cardenolides

Choose the correct options given below :

- (1) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
- (4) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 145 Question Id : 7495721515 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I (Chemical Mutagen)	List II (Cytological effect)
(A) Adenine	(I) Production of abnormal DNA
(B) Nitrogen mustard	(II) Inhibition of deoxyribonucleotide synthesis
(C) Deoxyadenosine	(III) Inhibition of early stages of DNA synthesis, purine formation
(D) Inorganic cyanides	(IV) Inhibition of cytochrome oxidase with resultant peroxide formation

Choose the correct options given below :

- (1) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (2) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)
- (3) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (4) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 146 Question Id : 7495721516 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Match List I with List II.

List I (volatile oil)	List II (Plant)
(A) Aldehyde	(I) Coriander
(B) Ether	(II) Lemon grass
(C) Alcohol	(III) Caraway
(D) Ketone	(IV) Fennel

Choose the correct options given below :

- (1) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (4) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 147 Question Id : 7495721517 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Which of the following is a monoclonal antibody approved for the treatment of HER-2 positive front breast cancer?

- (1) Trastuzumab
- (2) Rituximab
- (3) Bevacizumab
- (4) Cetuximab

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 148 Question Id : 7495721518 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Ginseng is obtained from the roots of Panax ginseng.

Statement II : Active saponins containing ginseng are located inside of the root cambium.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 149 Question Id : 7495721519 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Given below are two statements :

Statement I : Sugar coating of oral solid dosage forms causes negligible increase in the weight due to coating materials.

Statement II : The process of sugar coating is usually a multi stage process.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Question Number : 150 Question Id : 7495721520 Question Type : MCQ Option Shuffling : No Correct Marks : 1 Wrong Marks : 0.25

Give below are two statements :

Statement I : Bedaquiline is a ATP synthase inhibitor approved for the treatment of MDR – TB.

Statement II : Bedaquiline has a boxed warning for QT prolongation.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 1. 1
- 2. 2
- 3. 3
- 4. 4