National Testing Agency

Question Paper Name :	WATER SCIENCE AND TECHNOLOGY PG 23rd Sep 2020 Shift 1 Set 2
Subject Name :	WATER SCIENCE AND TECHNOLOGY PG
Creation Date :	2020-09-23 13:49:39
Duration :	120
Total Marks :	480
Display Marks:	Yes
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes

WATER SCIENCE AND TECHNOLOGY PG

Group Number :	1
Group Id :	21052913
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	480
Is this Group for Examiner? :	No

WATER SCIENCE AND TECHNOLOGY PG

Section Id :	21052917
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory

Number of Questions : 120

Number of Questions to be attempted : 120

Section Marks : 480

Display Number Panel : Yes

Group All Questions : Yes

Mark As Answered Required? : Yes

Sub-Section Number : 1

Sub-Section Id : 21052917

Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 2105291501 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Khaira disease in rice is associated with the deficiency of

1. Potassium

2. Iron

3. Boron

4. Zinc

Options :

2105296001. 1

2105296002. 2

2105296003. 3

2105296004. 4

Question Number : 2 Question Id : 2105291502 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT a deemed university under ICAR

1. IARI, New Delhi
2. NDRI, Karnal
3. CIFE, Mumbai
4. IIMR, Ludhiana

Options :
2105296005. 1
2105296006. 2
2105296007. 3
2105296008. 4

Question Number : 3 Question Id : 2105291503 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Jawaharlal Nehru KrishiVishvaVidyalaya is located at

1. Jabalpur
2. Raipur
3. New Delhi
4. Nagpur

Options :
2105296009. 1
2105296010. 2
2105296011. 3
2105296012. 4

Question Number : 4 Question Id : 2105291504 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following crops is a leading vegetable oil source at a global level?

1. Mustard
2. Groundnut
3. Soybean
4. Sunflower

Options :
2105296013. 1
2105296014. 2
2105296015. 3
2105296016. 4

Question Number : 5 Question Id : 2105291505 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In wheat, the most critical stage for irrigation is

1. CRI stage
2. Tillering stage
3. Jointing stage
4. Milking stage

Options :
2105296017. 1
2105296018. 2
2105296019. 3
2105296020. 4

Question Number : 6 Question Id : 2105291506 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I: In sugarcane true seed is known as 'fluff' whereas inflorescence is known as 'arrow'

Statement II: One year crop of sugarcane in peninsular India is known as Adsali

In the light of the above statements, choose the **most appropriate** 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :
2105296021. 1
2105296022. 2
2105296023. 3
2105296024. 4

Question Number : 7 Question Id : 2105291507 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Tarai soils are found in

1. Uttrakhand, Uttar Pradesh, Bihar and West Bengal
2. Madhya Pradesh and Rajasthan
3. Gujarat and Rajasthan
4. Kerala and Tamil Nadu

Options :
2105296025. 1
2105296026. 2

2105296027. 3
2105296028. 4

Question Number : 8 Question Id : 2105291508 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Molya disease of wheat is caused by

1. Virus
2. Bacteria
3. Fungi
4. Nematode

Options :
2105296029. 1
2105296030. 2
2105296031. 3
2105296032. 4

Question Number : 9 Question Id : 2105291509 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following options is the correct chronological order of implementation Government programs?

A. PM Ujjwala Yojna

B. MUDRA Bank Yojna

C. Atal Pension Yojna

D. MGNREGA

Choose the correct answer from the options given below:

1. A → B → C → D
2. D → B → A → C
3. C → B → D → A
4. A → D → C → B

Options :
2105296033. 1
2105296034. 2
2105296035. 3
2105296036. 4

Question Number : 10 Question Id : 2105291510 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Which one of the following cell organelles is known as the energy house of the cell?

1. Mitochondria
2. Ribosome
3. Lysosome
4. Lomasome

Options :
2105296037. 1
2105296038. 2

2105296039. 3

2105296040. 4

Question Number : 11 Question Id : 2105291511 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I: Photosynthesis is a reduction process whereas respiration is an oxidation process

Statement II: Photosynthesis process is not sensitive to the wavelength of light

In the light of the above statements, choose the *most appropriate* 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :

2105296041. 1

2105296042. 2

2105296043. 3

2105296044. 4

Question Number : 12 Question Id : 2105291512 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following crop plant was used by G. J. Mendel to establish the mechanism of character transmission?

1. Wheat
2. Oat
3. Garden pea
4. Barley

Options :
2105296045. 1
2105296046. 2
2105296047. 3
2105296048. 4

Question Number : 13 Question Id : 2105291513 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Which one of the following is NOT a part of Mendel's Laws of Heredity?

1. Law of Dominance and Recessiveness
2. Law of Quantitative Inheritance
3. Law of Segregation
4. Law of Independent Assortment

Options :
2105296049. 1
2105296050. 2
2105296051. 3
2105296052. 4

Question Number : 14 Question Id : 2105291514 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Proteolysis is the phenomenon of

1. Formation of proteins
2. Disintegration of proteins
3. Synthesis of amino-acids
4. Synthesis of fats

Options :
2105296053. 1
2105296054. 2
2105296055. 3
2105296056. 4

Question Number : 15 Question Id : 2105291515 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In which of the following amino acids, sulphur is NOT a constituent unit?

1. Cysteine
2. Proline
3. Methionine
4. Cystine

Options :
2105296057. 1
2105296058. 2
2105296059. 3
2105296060. 4

Question Number : 16 Question Id : 2105291516 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following carbohydrates is a trisaccharide carbohydrate?

1. Raffinose
2. Sucrose
3. Starch
4. Cellulose

Options :

2105296061. 1

2105296062. 2

2105296063. 3

2105296064. 4

Question Number : 17 Question Id : 2105291517 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT the pillar of conservation tillage?

1. Minimum soil disturbance
2. Soil cover with crop residue
3. Nutrient management
4. Crop diversification

Options :

2105296065. 1

2105296066. 2

2105296067. 3

2105296068. 4

Question Number : 18 Question Id : 2105291518 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following agriculture commodities has the highest import during 2017-18?

1. Sugar
2. Maize
3. Tobacco
4. Vegetable oil

Options :

2105296069. 1

2105296070. 2

2105296071. 3

2105296072. 4

Question Number : 19 Question Id : 2105291519 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In which year, was the Pradhan Mantri Gram Sadak Yojna launched in India?

1. 2000
2. 2005
3. 2015
4. 2018

Options :

2105296073. 1

2105296074. 2

2105296075. 3

2105296076. 4

Question Number : 20 Question Id : 2105291520 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Produce of which one of the following crops is NOT a part of food grain production in India?

1. Rice
2. Chickpea
3. Maize
4. Niger

Options :
2105296077. 1
2105296078. 2
2105296079. 3
2105296080. 4

Question Number : 21 Question Id : 2105291521 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

With 46% N content in urea and recommended dose of 150 kg N/ha for maize crop, how much urea is required to apply one-third nitrogen of the recommended dose?

1. 150 kg/ha
2. 109 kg/ha
3. 124 kg/ha
4. 96 kg/ha

Options :
2105296081. 1
2105296082. 2
2105296083. 3
2105296084. 4

Question Number : 22 Question Id : 2105291522 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Per Drop More Crop (PDMC) is the component of which of the following programmes of the Government?

1. PMFBY
2. PMKSY
3. PMGSY
4. MGNREGA

Options :
2105296085. 1
2105296086. 2
2105296087. 3
2105296088. 4

Question Number : 23 Question Id : 2105291523 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I		List II	
A.	Wheat	I.	ICGS 11
B.	Maize	II.	ICPH 8
C.	Pigeonpea	III.	Ganga 11
D.	Groundnut	IV.	HD 2967

Choose the correct answer from the options given below:

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

Options :

2105296089. 1

2105296090. 2

2105296091. 3

2105296092. 4

Question Number : 24 Question Id : 2105291524 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In respiration, the end product of glycolysis process is

1. Phosphoglyceric acid

2. Phosphenolpyruvic acid

3. Alanine

4. Pyruvic acid

Options :

2105296093. 1

2105296094. 2

2105296095. 3

2105296096. 4

Question Number : 25 Question Id : 2105291525 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Of the following states, which state has highest acreage and production of rice?

1. West Bengal

2. Punjab

3. Haryana

4. Madhya Pradesh

Options :

2105296097. 1

2105296098. 2
2105296099. 3
2105296100. 4

Question Number : 26 Question Id : 2105291526 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

	List I		List II
A.	Wheat	I.	Beushening
B.	Rice	II.	*Phalaris minor*
C.	Mango	III.	Pegging
D.	Groundnut	IV.	Alphonso

Choose the correct answer from the options given below:

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

Options :
2105296101. 1
2105296102. 2
2105296103. 3
2105296104. 4

Question Number : 27 Question Id : 2105291527 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Theory of proton transport concept given by Levitt in 1974 related to

1. Mechanism of opening and closing of stomata
2. Energy assimilation in photosynthesis
3. Diffusion through stomatal pores
4. Mechanism of guttation in plant

Options :
2105296105. 1
2105296106. 2
2105296107. 3
2105296108. 4

Question Number : 28 Question Id : 2105291528 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Key lock theory given by Fisher (1898) explain the mode of action of

1. Hormone
2. Enzyme
3. ATP
4. Herbicides

Options :
2105296109. 1
2105296110. 2
2105296111. 3
2105296112. 4

Question Number : 29 Question Id : 2105291529 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

How many divisions of enzymes have been suggested by International Union of Biochemistry?

1. 10
2. 6
3. 7
4. 3

Options :
2105296113. 1
2105296114. 2
2105296115. 3
2105296116. 4

Question Number : 30 Question Id : 2105291530 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Crassulacean acid metabolism is present in

1. Wheat
2. Agave
3. Sweet potato
4. Sorghum

Options :
2105296117. 1
2105296118. 2
2105296119. 3
2105296120. 4

Question Number : 31 Question Id : 2105291531 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Water resources are often reported in Billion M^3, Km^3 and Million ha-m (m ha-m). Which two of these are the same?

1. Billion M^3 and M ha-m
2. Billion M^3 and Km^3
3. Km^3 and Million ha-m
4. None of the three are equal

Options :

2105296121. 1
2105296122. 2
2105296123. 3
2105296124. 4

Question Number : 32 Question Id : 2105291532 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Arrange the following irrigation projects in order of construction from the earliest to most recent

A. Sarda canal
B. Damodar Canal
C. Pawara Canal
D. Kharung Canal
E. Ken Canal

Choose the correct answer from the options given below

1. E → A → D → B → C
2. A → E → B → D → C
3. D → B → C → E → A
4. B → C → E → A → D

Options :

2105296125. 1
2105296126. 2
2105296127. 3
2105296128. 4

Question Number : 33 Question Id : 2105291533 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of thermal stratification in ponds, the layer of cooler water is known as

1. Hypolimnion
2. Hyperlimnion
3. Epilimnion
4. Thermocline

Options :
2105296129. 1
2105296130. 2
2105296131. 3
2105296132. 4

Question Number : 34 Question Id : 2105291534 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What would be the estimated peak rate of runoff (m^3/s) from a 100 ha catchment having value of runoff coefficient (C) as 0.3 and intensity of rainfall for duration equal to time of concentration as 120 mm/hr?

1. 12 m^3/s
2. 30 m^3/s
3. 10 m^3/s
4. 3 m^3/s

Options :

2105296133. 1
2105296134. 2
2105296135. 3
2105296136. 4

Question Number : 35 Question Id : 2105291535 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Tetrasodium polyphosphate is used in ponds to reduce

1. Evaporation
2. Seepage loss
3. Weed growth
4. Water Temperature

Options :
2105296137. 1
2105296138. 2
2105296139. 3
2105296140. 4

Question Number : 36 Question Id : 2105291536 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Elongation ratio (Re) used to describe the shape of a watershed is given by

1. Basin area / Area of the circle with perimeter equal to the perimeter of the basin
2. Basin area/ (Basin length)^2
3. Basin area/Basin length
4. Diameter of the circle of the same area as that of basin/ Maximum basin length

Options :
2105296141. 1
2105296142. 2

2105296143. 3
2105296144. 4

Question Number : 37 Question Id : 2105291537 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Ruggedness number of a watershed is given as

1. Basin relief × Drainage density
2. Basin relief / Drainage density
3. Drainage density/ Basin relief
4. Basin relief – Drainage density

Options :
2105296145. 1
2105296146. 2
2105296147. 3
2105296148. 4

Question Number : 38 Question Id : 2105291538 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A Third-order stream is formed when

A. A second-order stream joins a second-order stream
B. Two second-order streams join a third-order stream
C. A first-order stream joins a second-order stream
D. A third-order stream joins a third-order stream

Choose the correct answer from the options given below:

1. A and B only
2. C and D only
3. B and D only
4. A, B and D only

Options :
2105296149. 1
2105296150. 2
2105296151. 3
2105296152. 4

Question Number : 39 Question Id : 2105291539 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

The major function of the emergency spillway in a farm pond is to safeguard the earthen embankment/ dam from

1. Overtopping
2. Piping
3. Overturning
4. Sliding

Options :
2105296153. 1
2105296154. 2
2105296155. 3

2105296156. 4

Question Number : 40 Question Id : 2105291540 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For Indian black soils under AMC-I conditions, the best relationships among Initial Abstraction (I_a) and the Potential Maximum Retention (S_m) is given by the popular SCS-CN method.

Select the best from options given below

1. $I_a = 0.1\ S_m$
2. $I_a = 0.2\ S_m$
3. $I_a = 0.3\ S_m$
4. $I_a = 0.15\ S_m$

Options :

2105296157. 1

2105296158. 2

2105296159. 3

2105296160. 4

Question Number : 41 Question Id : 2105291541 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The peak runoff rate Q_p in m^3/s by the Ryves formula is given as $Q_p = C_r A^b$, where A is the area in km^2 and C_r is Ryves constant. The value of exponent b is

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

Options :

2105296161. 1

2105296162. 2

2105296163. 3

2105296164. 4

Question Number : 42 Question Id : 2105291542 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In watershed hydrology, the 'Kirpich's Equation' is used to directly compute

1. Surface runoff

2. Time of concentration

3. Watershed's lag time

4. Base flow

Options :

2105296165. 1

2105296166. 2

2105296167. 3

2105296168. 4

Question Number : 43 Question Id : 2105291543 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Precipitation that infilters into soils and then moves laterally through the upper soil crust to appear at the surface at some location away from the entry point is known as

1. Surface runoff

2. Base flow

3. Interflow

4. Neither surface, nor base nor interflow

Options :

2105296169. 1

2105296170. 2

2105296171. 3
2105296172. 4

Question Number : 44 Question Id : 2105291544 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For a concrete or paved surface, curve number will tend to be almost equal to

1. 0
2. 100
3. 50
4. 80

Options :
2105296173. 1
2105296174. 2
2105296175. 3
2105296176. 4

Question Number : 45 Question Id : 2105291545 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are the two statements

Statement I: For Indian conditions, a major irrigation project has a culturable command area of 10000 ha or more

Statement II: Any minor irrigation project for Indian conditions usually has a culturable command area of 2000 ha or less.

In light of the above statements, choose the **most appropriate** 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :
2105296177. 1
2105296178. 2
2105296179. 3
2105296180. 4

Question Number : 46 Question Id : 2105291546 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

5 gm of sodium chloride is dissolved in 2 liters of water. The salt concentration in water in ppm is

1. 5000
2. 10000
3. 2500
4. 2000

Options :
2105296181. 1

2105296182. 2
2105296183. 3
2105296184. 4

Question Number : 47 Question Id : 2105291547 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The most commonly used unit for expressing the total quantity of dissolved salts present in a given water sample is

1. decisiemens per meter
2. siemens
3. gm per liter
4. decisiemens

Options :
2105296185. 1
2105296186. 2
2105296187. 3
2105296188. 4

Question Number : 48 Question Id : 2105291548 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Laboratory analysis of a water sample reported the presence of following constituents Na = 14.8 meq/l, Ca = 3.5 meq/l, Mg = 4.5. meq/l, CO_3 = 0.4 meq/l, HCO_3 = 2.6 meq/l. The sodium adsorption ratio of water is

1. 7.4
2. 11.2
3. 9.9
4. 8.5

Options :

2105296189. 1
2105296190. 2
2105296191. 3
2105296192. 4

Question Number : 49 Question Id : 2105291549 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The water requirement of a crop is 280 mm and the electrical conductivity (EC) of irrigation and percolation water below the root zone respectively are 2 and 8 ds/m respectively. How much irrigation water is required to meet both the crop water requirement and the leaching requirement?

1. 350 mm
2. 373.3 mm
3. 280 mm
4. 1120 mm

Options :
2105296193. 1
2105296194. 2
2105296195. 3
2105296196. 4

Question Number : 50 Question Id : 2105291550 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

'NRAA' associated with rainfed agriculture of India, is located at

1. Mumbai
2. Jodhpur
3. Bengaluru
4. Delhi

Question Number : 51 Question Id : 2105291551 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Highest specific surface is observed in

1. Kaolinite
2. Montmorillonite
3. Illite
4. Chlorite

Options :

2105296201. 1

2105296202. 2

2105296203. 3

2105296204. 4

Question Number : 52 Question Id : 2105291552 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Textural triangle of ISSS model contains

1. 4 textural classes
2. 8 textural classes
3. 12 textural classes
4. 16 textural classes

Options :

2105296205. 1

2105296206. 2
2105296207. 3
2105296208. 4

Question Number : 53 Question Id : 2105291553 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Swelling and shrinkage property is distinct in

1. Kaolinite clay
2. Illite clay
3. Allopane clay
4. Montmorillonite clay

Options :
2105296209. 1
2105296210. 2
2105296211. 3
2105296212. 4

Question Number : 54 Question Id : 2105291554 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A solution having pH of 6.0 is how much more acidic than a similar solution of pH of 7.0?

1. 2 times
2. 5 times
3. 10 times
4. 15 times

Options :
2105296213. 1
2105296214. 2
2105296215. 3

2105296216. 4

Question Number : 55 Question Id : 2105291555 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

1:1 type of layer silicate clay is

1. Chlorite
2. Kaolinite
3. Montmorillonite
4. Illite

Options :

2105296217. 1

2105296218. 2

2105296219. 3

2105296220. 4

Question Number : 56 Question Id : 2105291556 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Symbiotic nitrogen fixation involving Rhizobium bacteria occurs in

1. Rice
2. Groundnut
3. Sorghum
4. Wheat

Options :

2105296221. 1

2105296222. 2

2105296223. 3

2105296224. 4

Question Number : 57 Question Id : 2105291557 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The gaseous phase of soils contains the following molecules in order of

1. $N_2 > O_2 > CO_2 > Ne$
2. $O_2 > N_2 > CO_2 > Ne$
3. $CO_2 > N_2 > O_2 > Ne$
4. $O_2 > N_2 > Ne > CO_2$

Options :

2105296225. 1

2105296226. 2

2105296227. 3

2105296228. 4

Question Number : 58 Question Id : 2105291558 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Compared to coarse-textured soils, fine-textured soils have

A. Higher porosity
B. Higher cation exchange capacity
C. Higher density
D. Lower soil water content

Choose the correct answer from the options given below:

1. A , B and C only
2. A , B and D only
3. B, C and D only
4. A , C and D only

Options :

2105296229. 1

2105296230. 2
2105296231. 3
2105296232. 4

Question Number : 59 Question Id : 2105291559 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

According to Darcy's Law, the saturated flow of liquid through porous medium is proportional to

1. Hydraulic head
2. Hydraulic conductivity of soil
3. Viscosity of water
4. Both 1 and 2

Options :
2105296233. 1
2105296234. 2
2105296235. 3
2105296236. 4

Question Number : 60 Question Id : 2105291560 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The standard 'A' horizon of soil usually consists sub-horizons which are,

1. Rich in organic matter and intimately mixed with mineral water
2. Poor in organic matter
3. Average organic horizon with low bulk density
4. Organically poor and with salt particles

Options :
2105296237. 1
2105296238. 2

2105296239. 3

2105296240. 4

Question Number : 61 Question Id : 2105291561 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following standard sets of values for pH, EC, and ESP respectively for saline-alkaline soils is correct?

1. > 8.5, < 4.0 dSm^{-1} and >15
2. <8.5, < 4.0 dSm^{-1} and <15
3. > 8.5, > 4.0 dSm^{-1} and <15
4. < 8.5, > 4.0 dSm^{-1} and >15

Options :

2105296241. 1

2105296242. 2

2105296243. 3

2105296244. 4

Question Number : 62 Question Id : 2105291562 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The SI unit for cation exchange capacity of soil is

1. dSm^{-1}
2. Joules $^{0}C^{-1}$
3. Mg kg^{-1}
4. $Cmol$ kg^{-1}

Options :

2105296245. 1

2105296246. 2

2105296247. 3

Question Number : 63 Question Id : 2105291563 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Nitrogen element facilitates which functions in plants

A.   Chlorophyll synthesis
B.   Protein synthesis
C.   Nucleic acid synthesis
D.   Pollen germination

Choose the correct answer from the options given below:

1. A and B only
2. B and C only
3. A, B and C only
4. B and D only

Options :
2105296249. 1
2105296250. 2
2105296251. 3
2105296252. 4

Question Number : 64 Question Id : 2105291564 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following is a measure of how much light that hits a surface is reflected without being absorbed?

1. Abstraction
2. Albedo
3. El Nino
4. Transpiration

Options :
2105296253. 1
2105296254. 2
2105296255. 3
2105296256. 4

Question Number : 65 Question Id : 2105291565 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

The charge structural shape of water is

1. Di-octahedral
2. Tri-octahedral
3. Tetrahedral
4. Rhomboidal

Options :
2105296257. 1
2105296258. 2
2105296259. 3
2105296260. 4

Question Number : 66 Question Id : 2105291566 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

In highly leached acidic soils, low absorption of micro-nutrients is expected for

1. Iron and Manganese
2. Boron and Molybdenum
3. Calcium and Magnesium
4. Phosphorous and Potassium

Options :

2105296261. 1
2105296262. 2
2105296263. 3
2105296264. 4

Question Number : 67 Question Id : 2105291567 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Smectite mineral colloid is

1. Organic amorphous colloid
2. Inorganic crystalline colloid
3. Inorganic amorphous colloid
4. Organic crystalline colloid

Options :

2105296265. 1
2105296266. 2
2105296267. 3
2105296268. 4

Question Number : 68 Question Id : 2105291568 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The extent of distribution of acid soils in various states is in the order of

1. West Bengal >Andhra Pradesh> Assam
2. Andhra Pradesh> West Bengal> Assam
3. Andhra Pradesh> Assam> West Bengal
4. West Bengal> Assam> Andhra Pradesh

Options :
2105296269. 1
2105296270. 2
2105296271. 3
2105296272. 4

Question Number : 69 Question Id : 2105291569 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Match List I with List II

	List I		List II
A.	Zinc	I.	Grey speck of Oats
B.	Manganese	II.	Mottle leaf of Citrus
C.	Molybdenum	III.	Male flower sterility
D.	Copper	IV.	Whiptail of Cauliflower

Choose the correct answer from the options given below:

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

Options :
2105296273. 1
2105296274. 2
2105296275. 3

2105296276. 4

Question Number : 70 Question Id : 2105291570 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Most Laterite soils are rich in

1. Phosphorous and Calcium
2. Calcium and Magnesium
3. Molybdenum and Chlorine
4. Iron and Aluminum

Options :
2105296277. 1
2105296278. 2
2105296279. 3
2105296280. 4

Question Number : 71 Question Id : 2105291571 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The highest area of salt-affected soils in various states of India remains in the following order

1. Rajasthan> Gujarat> Haryana
2. Gujarat>Rajastan> Haryana
3. Haryana>Rajastan> Gujarat
4. Gujarat> Punjab> Rajastan

Options :
2105296281. 1
2105296282. 2
2105296283. 3
2105296284. 4

Question Number : 72 Question Id : 2105291572 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The pF values at Saturation, Field capacity, Permanent wilting point and Hygroscopic coefficient respectively are

1. 0, 2.53, 4.18 and 4.5
2. 4.5, 4.18, 2.53 and 0
3. 2.53, 4.5, 4.18 and 0
4. 0, 4.18, 2.53 and 4.5

Options :

2105296285. 1

2105296286. 2

2105296287. 3

2105296288. 4

Question Number : 73 Question Id : 2105291573 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

When 220g of core shaped fresh soil with 5 cm length and 6 cm diameter lost 20g on drying, what is its bulk density?

1. $1.31 \ gcm^{-3}$
2. $1.41 \ gcm^{-3}$
3. $1.51 \ gcm^{-3}$
4. $1.61 \ gcm^{-3}$

Options :

2105296289. 1

2105296290. 2

2105296291. 3

2105296292. 4

Question Number : 74 Question Id : 2105291574 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A terrace is being proposed to be constructed for a land slope of 20% medium-textured soil with 0.5 m depth of cut. What would be the width of the terrace if the terrace cut is vertical?

1. 5 m
2. 0.5 m
3. 1 m
4. 2.5 m

Options :

2105296293. 1
2105296294. 2
2105296295. 3
2105296296. 4

Question Number : 75 Question Id : 2105291575 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are the two statements.

Statement I: Porous shelter-belt is more effective than dense shelter-belt in controlling wind erosion

Statement II: Tillage operation should be carried out across the prevailing wind direction.

In light of the above statements, choose the **most appropriate** 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :
2105296297. 1
2105296298. 2
2105296299. 3
2105296300. 4

Question Number : 76 Question Id : 2105291576 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In the Puertorican type of terraces, what kind of barriers are mostly provided on convenient grades?

1. Stone barriers
2. Vegetative barriers
3. Masonry barriers
4. Concrete structure

Options :
2105296301. 1

2105296302. 2
2105296303. 3
2105296304. 4

Question Number : 77 Question Id : 2105291577 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What would be the length of earthen bunds per hectare for an area of 4% slope and situated in a medium rainfall zone?

1. 4 m
2. 400 m
3. 3.33 m
4. 333 m

Options :
2105296305. 1
2105296306. 2
2105296307. 3
2105296308. 4

Question Number : 78 Question Id : 2105291578 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is provided to check the piping through the foundation of a soil conservation structure?

A. Toe wall

B. Cutoff wall

C. Wing wall

D. Headwall

Choose the correct answer from the options given below

1. A Only

2. A and B only

3. B and C only

4. C and D only

Options :
2105296309. 1
2105296310. 2
2105296311. 3
2105296312. 4

Question Number : 79 Question Id : 2105291579 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Given below are the two statements.

Statement I: In case of any kind of water harvesting embankment is constructed across the flow in a river or channel; creep theory states that piping will always occur along the line of creep inside the foundation of the structure

Statement II: Weighted creep ratio is an indicator to decide or design creep length, and it remains a ratio of weighted creep distance and the associated head

In light of the above statements, choose the **most appropriate** 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :

2105296313. 1

2105296314. 2

2105296315. 3

2105296316. 4

Question Number : 80 Question Id : 2105291580 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are the two statements.

Statement I: Major functional uses of drop spillways are to control stream bed gradient, to serve as inlet/outlet, to control tail water at outlet, and also to serve as a reservoir.

Statement II: 'Stability' and 'Non-Clogging of Weir' cannot be considered as advantages of drip spillways.

In light of the above statements, choose the **most appropriate** 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :
2105296317. 1
2105296318. 2
2105296319. 3
2105296320. 4

Question Number : 81 Question Id : 2105291581 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

During agricultural water balances, the quantitative relativity of values for 'Consumptive Use (CU)' and 'Evapo-Transpiration (ET)' could be accurately expressed by which one of the following statements?

1. CU = ET
2. CU > ET
3. CU < ET
4. CU < ET only in temperate climates

Options :

2105296321. 1
2105296322. 2
2105296323. 3
2105296324. 4

Question Number : 82 Question Id : 2105291582 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Irrigation scheduling for a 1 ha rice field is planned in such a way that the amount of irrigation to be provided per day is equal to the amount of ET/day. On a day if 1 cm of ET was observed, how much of water is to be used for irrigation on that day?

1. 1 m^3
2. 10 m^3
3. 100 m^3
4. 0.1 m^3

Options :

2105296325. 1
2105296326. 2
2105296327. 3
2105296328. 4

Question Number : 83 Question Id : 2105291583 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Reference crop evapotranspiration (ET_0) is dependent on

1. Climatic factor only
2. Climatic factor and crop factor only
3. Crop factor only
4. Climatic, crop and soil factor only

Options :

2105296329. 1
2105296330. 2
2105296331. 3
2105296332. 4

Question Number : 84 Question Id : 2105291584 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Lysimeter measures

1. Runoff

2. Transpiration

3. Potential evapotranspiration

4. Actual evapotranspiration

Options :
2105296333. 1
2105296334. 2
2105296335. 3
2105296336. 4

Question Number : 85 Question Id : 2105291585 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Water requirement of a crop includes

1. Evaporation only

2. Evapotranspiration only

3. Evapotranspiration and losses such as deep percolation

4. Evapotranspiration, deep percolation, leaching requirement and pre- sowing irrigation

Options :
2105296337. 1
2105296338. 2

2105296339. 3
2105296340. 4

Question Number : 86 Question Id : 2105291586 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If $f(\theta) = e^{sin\theta}$, then $f'(\theta) = 0$ for which value of θ

1. π/2
2. π
3. 2π
4. 0

Options :

2105296341. 1
2105296342. 2
2105296343. 3
2105296344. 4

Question Number : 87 Question Id : 2105291587 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

1. If $x^y = e^{x-y}, \frac{dy}{dx} = ?$

1. $\frac{logx}{(1 + logx)^2}$

2. $\frac{logx^2}{1 + logx}$

3. $\left(\frac{logx}{1 + logx}\right)^2$

4. $\frac{logx}{1 + logx}$

Options :

2105296345. 1
2105296346. 2
2105296347. 3
2105296348. 4

Question Number : 88 Question Id : 2105291588 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If x is real, the minimum value of $f(x) = x^2 - 8x + 17$ would be

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

Options :
2105296349. 1
2105296350. 2
2105296351. 3
2105296352. 4

Question Number : 89 Question Id : 2105291589 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The arithmetic mean of the series 1, 2, 4, 8, 16.....2^n is

1. $\dfrac{2^n - 1}{n}$

2. $\dfrac{2^{n+1} - 1}{n + 1}$

3. $\dfrac{2^n + 1}{n}$

4. $\dfrac{2^n - 1}{n + 1}$

Options :

2105296353. 1
2105296354. 2
2105296355. 3
2105296356. 4

Question Number : 90 Question Id : 2105291590 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Two persons appear for an interview for two posts. The probability of the person A's selection is 1/5 and that of B is 1/7. The probability of atleast one of them is selected

1. $\dfrac{9}{5}$

2. $\dfrac{12}{35}$

3. $\dfrac{2}{7}$

4. $\dfrac{11}{35}$

Options :

2105296357. 1
2105296358. 2
2105296359. 3
2105296360. 4

Question Number : 91 Question Id : 2105291591 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

An urn contains 15 black and 10 white balls. Two balls are drawn from the urn one after another without replacement. What is the probability that both drawn balls are black?

1. $\dfrac{5}{8}$

2. $\dfrac{7}{20}$

3. $\dfrac{6}{25}$

4. $\dfrac{1}{5}$

Options :

2105296361. 1

2105296362. 2

2105296363. 3

2105296364. 4

Question Number : 92 Question Id : 2105291592 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The order and degree of the differential equation $\dfrac{d^2y}{dx^2} + \sqrt{x + \left(\dfrac{dy}{dx}\right)^3} = 0$ is

1. (2,2)

2. (3,2)

3. (2,3)

4. (1,3)

Options :

2105296365. 1

2105296366. 2

2105296367. 3

2105296368. 4

Question Number : 93 Question Id : 2105291593 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

$\int_0^{\pi/2} Cosx.e^{Sinx} \, dx$ is equal to

1. e+1
2. e-1
3. e
4. -e

Options :
2105296369. 1
2105296370. 2
2105296371. 3
2105296372. 4

The mean of n observations is $\bar{x}$. If one observation x_{n+1} is added and the new mean of n+1

observations was found to be same as previous. What was the value of x_{n+1}?

1. 0
2. 1
3. n
4. $\bar{x}$

Options :
2105296373. 1
2105296374. 2
2105296375. 3
2105296376. 4

Correct Marks : 4 Wrong Marks : 1

An ideal fluid has one of the following characteristics

1. Zero surface tension and incompressible
2. Zero shear stress and behaves as a perfect gas
3. Constant density and viscosity
4. Zero viscosity and incompressible

Options :
2105296377. 1
2105296378. 2
2105296379. 3
2105296380. 4

Question Number : 96 Question Id : 2105291596 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

The following statements are made with respect to capillaries and factors affecting it

A.   Capillaries are directly proportional to surface tension
B.   Capillaries are inversely proportional to density of liquid
C.   Capillaries are directly proportional to diameter of the tube
D.   Capillaries are inversely proportional to surface tension
E.   Capillaries are directly proportional to density of liquid

Choose the correct answer from the options given below:

1. A and C only
2. A and B only
3. B and C only
4. D and E only

Options :
2105296381. 1

2105296382. 2
2105296383. 3
2105296384. 4

Question Number : 97 Question Id : 2105291597 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If the kinematic viscosity of a liquid is 6 stokes and specific gravity is 1.9, then what would be its dynamic viscosity?

1. 10 poise
2. 11.4 poise
3. 8.6 poise
4. 7.9 poise

Options :
2105296385. 1
2105296386. 2
2105296387. 3
2105296388. 4

Question Number : 98 Question Id : 2105291598 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Venturimeter works on the principle of

1. Law of conservation of mass
2. Law of conservation of energy
3. Law of conservation of force
4. Law of conservation of velocity

Options :
2105296389. 1
2105296390. 2

2105296391. 3
2105296392. 4

Question Number : 99 Question Id : 2105291599 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Continuity equation of fluid flow is

1. Law of conservation of energy
2. Law of conservation of mass
3. Law of conservation of momentum
4. Law of conservation of pressure

Options :
2105296393. 1
2105296394. 2
2105296395. 3
2105296396. 4

Question Number : 100 Question Id : 2105291600 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Ten sprinklers are spaced equally at 10 meters on a lateral. The laterals are spaced 1000 cm on the main line. The recommended fertilizer dose is 120 kg/ha. The amount of fertilizer to be applied at each setting is

1. 0.12 kg
2. 1.20 kg
3. 12.0 kg
4. 120 kg

Options :
2105296397. 1
2105296398. 2

2105296399. 3

2105296400. 4

Question Number : 101 Question Id : 2105291601 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

As the value of specific speed of centrifugal pump increases, the pump type changes from

1. Radial flow to axial flow type and then to mixed flow type

2. Radial flow to mixed flow type and then to axial flow type

3. Mixed flow to radial flow type and then to axial flow type

4. Axial flow to radial flow type and then to mixed flow type

Options :

2105296401. 1

2105296402. 2

2105296403. 3

2105296404. 4

Question Number : 102 Question Id : 2105291602 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

While constructing a lysimeter, what are the factors on which it depends

A. The heat advection through walls is to be kept minimum by using circular tanks
B. To maintain a moisture gradient representative of the surroundings, adequate drainage
facilities must be provided
C. The heat advection through walls should be maximum by using rectangular tanks
D. No need to maintain moisture gradient in lysimeter

Choose the correct answer from the options given below:

1. A only
2. A and B only
3. C only
4. C and D only

Options :
2105296405. 1
2105296406. 2
2105296407. 3
2105296408. 4

Question Number : 103 Question Id : 2105291603 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

The amount of energy required to move the water into the eye of an impeller is called as

1. Net positive suction head required
2. Net positive suction head available
3. Total energy head
4. Pressure head

Options :
2105296409. 1
2105296410. 2
2105296411. 3

2105296412. 4

Question Number : 104 Question Id : 2105291604 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The pump's efficiency is at its peak when the specific speed values range from

1. 100-450
2. 500-950
3. 1000-1950
4. 2000-3000

Options :

2105296413. 1

2105296414. 2

2105296415. 3

2105296416. 4

Question Number : 105 Question Id : 2105291605 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are the two statements.

Statement I: Hydraulic roughness (n) for flows in natural channels can be easily estimated by adopting Manning's equation, which is given as n = $(1/v)^* R^{2/3} * S^{1/2}$ (v = velocity, R= hydraulic radius, S = slope).

Statement II: Manning's roughness coefficient (n) does not have any dimension, i.e. it is purely dimensionless.

In light of the above statements, choose the **most appropriate** 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :

2105296417. 1

2105296418. 2

2105296419. 3

2105296420. 4

Question Number : 106 Question Id : 2105291606 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are the two statements.

Statement I: Triangular weirs do not have any element or effects of weir length.

Statement II: Triangular weirs are the best option of flow stage measurements when the discharges or flow depths are relatively very high.

In light of the above statements, choose the **most appropriate** 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :
2105296421. 1
2105296422. 2
2105296423. 3
2105296424. 4

Question Number : 107 Question Id : 2105291607 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Given below are the two statements.

Statement I: Most dug wells located in dry and hard rock areas, have discontinuous water tables

Statement II: Pumping tests in dug wells involve observation of rates of depletion as well as recuperation of water level during pumping period and also after stoppage of pumping (till water level in well gets sizably recovered)

In light of the above statements, choose the **most appropriate** 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :
2105296425. 1
2105296426. 2
2105296427. 3
2105296428. 4

Question Number : 108 Question Id : 2105291608 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The drainage coefficient of an area is 3.6 cm/day. What would be the discharge in m^3/s from an area of 60 ha?

1. 25 m^3/s
2. 0.25 m^3/s
3. 15 m^3/s
4. 0.025 m^3/s

Options :

2105296429. 1
2105296430. 2
2105296431. 3
2105296432. 4

Question Number : 109 Question Id : 2105291609 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Hydraulic radius in the Manning's equation is given as

1. Wetted perimeter/Cross-sectional area
2. Cross-sectional area/ Wetted perimeter
3. Cross-sectional area/Depth of flow
4. Cross-sectional area/Bottom width of channel

Options :
2105296433. 1
2105296434. 2
2105296435. 3
2105296436. 4

Question Number : 110 Question Id : 2105291610 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Random layout of drainage system is used in

1. Surface drainage only
2. Subsurface drainage only
3. Both surface and subsurface drainage
4. Neither in surface nor in subsurface drainage

Options :
2105296437. 1
2105296438. 2

2105296439. 3

2105296440. 4

Question Number : 111 Question Id : 2105291611 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Construction of a subsurface drainage system should begin from

1. Outlet

2. Laterals

3. Far end of the outlet

4. Anywhere in the field as per topography

Options :

2105296441. 1

2105296442. 2

2105296443. 3

2105296444. 4

Question Number : 112 Question Id : 2105291612 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Interceptor drains are used to intercept flow from

1. Sloping areas only

2. Seepage from irrigation networks only

3. Sloping areas and seepage from irrigation networks only

4. Neither sloping nor seepage from irrigation networks

Options :

2105296445. 1

2105296446. 2

2105296447. 3

2105296448. 4

Question Number : 113 Question Id : 2105291613 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are the two statements.

Statement I: Maps of soils, contours, slopes, present land uses, proposed land uses, proposed conservation structures, cropping patterns, and other such factors are bare pre-requisites for planning and developing any watershed management program

Statement II: Benchmark surveying and participatory rural appraisal surveying are two important exercises to be done before the initiation of a watershed project

In light of the above statements, choose the most appropriate 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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :
2105296449. 1
2105296450. 2
2105296451. 3
2105296452. 4

Question Number : 114 Question Id : 2105291614 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I	List II
A. Vertical drainage	I. Horizontal pipe drainage
B. Subsurface drainage	II. Pipeless drainage
C. Mole drainage	III. Drainage by trees
D. Bio-drainage	IV. Drainage by tube wells

Choose the correct answer from the options given below:

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

Options :
2105296453. 1
2105296454. 2
2105296455. 3
2105296456. 4

Question Number : 115 Question Id : 2105291615 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I: Auger hole method is used to measure the hydraulic conductivity of soils above the water table

Statement II: Inverse auger hole method is used to measure the hydraulic conductivity of soils above the water table

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 true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :
2105296457. 1
2105296458. 2
2105296459. 3
2105296460. 4

Question Number : 116 Question Id : 2105291616 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Irrigation water pricing of canal water in most states is based onGiven below are two statements

1. Area irrigated only
2. Type of crop cultivated only
3. Area and type of crop cultivated only
4. Volumetric supply of water

Options :
2105296461. 1

2105296462. 2
2105296463. 3
2105296464. 4

Question Number : 117 Question Id : 2105291617 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following tests is NOT performed to test the quality of clay/concrete tiles?

1. Visual test
2. Water absorption test
3. Three edge bearing test
4. Stiffness test

Options :

2105296465. 1
2105296466. 2
2105296467. 3
2105296468. 4

Question Number : 118 Question Id : 2105291618 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Derivation of Hooghoudt's equation assumes

1. Steady state conditions
2. Unsteady state conditions
3. Fluctuating water table conditions
4. Trafficability conditions to ease early tillage operations

Options :

2105296469. 1
2105296470. 2
2105296471. 3

2105296472. 4

Question Number : 119 Question Id : 2105291619 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

When there is direct drive from the engine or electric motor to the pump, then at what drive
efficiency the brake horse power is equal to shaft horse power

1. 25%
2. 50%
3. 75%
4. 100%

Options :

2105296473. 1

2105296474. 2

2105296475. 3

2105296476. 4

Question Number : 120 Question Id : 2105291620 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Shaft horse power is always

1. Equal to pump efficiency
2. Greater than water horse power
3. Lesser than water horse power
4. Equal to water horse power

Options :

2105296477. 1

2105296478. 2

2105296479. 3

2105296480. 4