National Testing Agency

Question Paper Name :	PGQP16 16th Sept 2021 Shift 2
Subject Name :	PGQP16
Creation Date :	2021-09-16 20:14:03
Duration :	120
Total Marks :	400
Display Marks:	Yes

PGQP16

Group Number :	1
Group Id :	864351324
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	400
Is this Group for Examiner? :	No

PART A-General

Section Id :	8643511190
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory

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Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	8643511423
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 86435128105 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A *conscientious* employee is always admired by his employers.

Which of the following best describes the underlined word of the above sentence?

1. Skillful
2. Dexterous
3. Clever
4. Careful

Options :

86435196871. 1

86435196872. 2

86435196873. 3

86435196874. 4

Question Number : 2 Question Id : 86435128106 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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I requested him to look after my things because I can confide _____ him.

1. on
2. to
3. in
4. with

Options :

86435196875. 1

86435196876. 2

86435196877. 3

86435196878. 4

Question Number : 3 Question Id : 86435128107 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Select the most suitable synonym 'Zenith'.

1. Middle
2. Pinnacle
3. Under
4. Contaminate

Options :

86435196879. 1

86435196880. 2

86435196881. 3

86435196882. 4

Question Number : 4 Question Id : 86435128108 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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Rajesh stood _____ Smita, but could not utter a single word for quite some time.

1. for
2. with
3. before
4. towards

Options :

86435196883. 1

86435196884. 2

86435196885. 3

86435196886. 4

Question Number : 5 Question Id : 86435128109 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following words can most appropriately replace the underlined group of words in the sentence?

The saint impressed everyone with his persuasive and fluent speech.

1. Lecture
2. Discourse
3. Expression
4. Eloquence

Options :

86435196887. 1

86435196888. 2

86435196889. 3

86435196890. 4

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Question Number : 6 Question Id : 86435128110 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Select the most suitable antonym 'Prey'.

1. Predator
2. Animal
3. Unprey
4. Deer

Options :

86435196891. 1

86435196892. 2

86435196893. 3

86435196894. 4

Question Number : 7 Question Id : 86435128111 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Identify the meaning of the idiom 'seeing eye to eye' from the options given below :

1. Agreeing with somebody
2. Treating someone with respect
3. Paying close attention to something someone is saying
4. Identifying a minor mistake

Options :

86435196895. 1

86435196896. 2

86435196897. 3

86435196898. 4

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Question Number : 8 Question Id : 86435128112 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Choose the correct spelling of the following :

1. Miselaneous
2. Miscellaneous
3. Missceelanous
4. Micelaeous

Options :

86435196899. 1

86435196900. 2

86435196901. 3

86435196902. 4

Question Number : 9 Question Id : 86435128113 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

He is not hardworking, _____ he is intelligent.

1. though
2. even though
3. notwithstanding
4. but

Options :

86435196903. 1

86435196904. 2

86435196905. 3

86435196906. 4

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Question Number : 10 Question Id : 86435128114 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Complete the second sentence by selecting the appropriate option given below :

I did not work hard at school. Consequently _____.

1. I did well at university
2. I failed most of my exams
3. I did not work hard in college
4. I was good at Mathematics

Options :

86435196907. 1

86435196908. 2

86435196909. 3

86435196910. 4

Question Number : 11 Question Id : 86435128115 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Choose the number which is different from others in the group.

1. 48
2. 12
3. 36
4. 59

Options :

86435196911. 1

86435196912. 2

86435196913. 3

86435196914. 4

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Question Number : 12 Question Id : 86435128116 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In the series 7, 14, 28, ……., what will be the 10^{th} term ?

1. 1792
2. 2456
3. 3584
4. 4096

Options :

86435196915. 1

86435196916. 2

86435196917. 3

86435196918. 4

Question Number : 13 Question Id : 86435128117 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

What term will fill the blank space?

A, C, F, H, ?, M

1. L
2. K
3. J
4. I

Options :

86435196919. 1

86435196920. 2

86435196921. 3

86435196922. 4

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Question Number : 14 Question Id : 86435128118 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In a certain code, RIPPLE is written as 613382 and LIFE is written as 8192.
How is PILLER written in that code?

1. 318826
2. 318286
3. 618826
4. 338816

Options :

86435196923. 1

86435196924. 2

86435196925. 3

86435196926. 4

Question Number : 15 Question Id : 86435128119 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

When Anuj saw Manish, he recalled "He is the son of the father of my daughter." Who is Manish?

1. Brother-in-law
2. Brother
3. Cousin
4. Uncle

Options :

86435196927. 1

86435196928. 2

86435196929. 3

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86435196930. 4

Question Number : 16 Question Id : 86435128120 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the given words in alphabetical order and tick the one that comes first.

1. Nature
2. Native
3. Narrate
4. Nascent

Options :

86435196931. 1

86435196932. 2

86435196933. 3

86435196934. 4

Question Number : 17 Question Id : 86435128121 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Manish ranked sixteenth from the top and twenty-ninth from the bottom among those who passed an examination. Six boys did not participate in the competition and five failed in it. How many boys were there in the class?

1. 40
2. 44
3. 50
4. 55

Options :

86435196935. 1

86435196936. 2

86435196937. 3

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86435196938. 4

Question Number : 18 Question Id : 86435128122 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If × means –, + means ÷, – means × and ÷ means +, then

15 –2 ÷ 900 + 90 × 100 = ?

1. 190
2. 180
3. 90
4. None of these

Options :

86435196939. 1

86435196940. 2

86435196941. 3

86435196942. 4

Question Number : 19 Question Id : 86435128123 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Find the number of triangles in the given figure :

1. 10
2. 9
3. 8
4. 7

Options :

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86435196943. 1

86435196944. 2

86435196945. 3

86435196946. 4

Question Number : 20 Question Id : 86435128124 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Greta Garbo is associated with

1. classical dance
2. acting
3. music
4. literature

Options :

86435196947. 1

86435196948. 2

86435196949. 3

86435196950. 4

Question Number : 21 Question Id : 86435128125 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Who created the famous Rock Garden of Chandigarh?

1. Gaudi
2. Nek Chand
3. Saarinen
4. Krishnarao Jaisim

Options :

86435196951. 1

86435196952. 2

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86435196953. 3

86435196954. 4

Question Number : 22 Question Id : 86435128126 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Who among the following is regarded as the leader of Chipko Movement?

1. Medha Patkar
2. Baba Amte
3. Sundarlal Bahuguna
4. Kiran Bedi

Options :

86435196955. 1

86435196956. 2

86435196957. 3

86435196958. 4

Question Number : 23 Question Id : 86435128127 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Hamja folk dance is related with which of the following tribes?

1. Rabha tribe
2. Bhil tribe
3. Bonda tribe
4. Gond tribe

Options :

86435196959. 1

86435196960. 2

86435196961. 3

86435196962. 4

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Question Number : 24 Question Id : 86435128128 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Recently 'Echo and Bifrost' were in the news. These are related to

1. Satellites
2. Undersea Internet cables
3. Supercomputers
4. Defence sophisticated weapons

Options :

86435196963. 1

86435196964. 2

86435196965. 3

86435196966. 4

Question Number : 25 Question Id : 86435128129 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following is the oldest dynasty?

1. Gupta
2. Maurya
3. Kanva
4. Kushan

Options :

86435196967. 1

86435196968. 2

86435196969. 3

86435196970. 4

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Part B-Transport Science and Technology

Section Id :	8643511191
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	75
Number of Questions to be attempted :	75
Section Marks :	300
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	8643511424
Question Shuffling Allowed :	Yes

Question Number : 26 Question Id : 86435128130 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In a simply supported beam, bending moment at the end

1. is always zero if it does not carry couple at the end
2. is zero, if the beam has uniformly distributed load only
3. is zero if the beam has concentrated loads only
4. may or may not be zero

Options :

86435196971. 1

86435196972. 2

86435196973. 3

86435196974. 4

Question Number : 27 Question Id : 86435128131 Question Type : MCQ Option Shuffling : No

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Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

For any part of a beam subjected to uniformly distributed load, bending moment diagram is

1. horizontal straight line
2. vertical straight line
3. line inclined to x-axis
4. parabolic

Options :

86435196975. 1

86435196976. 2

86435196977. 3

86435196978. 4

Question Number : 28 Question Id : 86435128132 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In a simply supported beam subjected to uniformly distributed load (w) over the entire length (l), total load=W, maximum bending moment is

1. $Wl/8$ or $wl2/8$ at the mid-point
2. $Wl/8$ or $wl2/8$ at the end
3. $Wl/4$ or $wl2/4$
4. $Wl/2$

Options :

86435196979. 1

86435196980. 2

86435196981. 3

86435196982. 4

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Question Number : 29 Question Id : 86435128133 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following are statically determinate beams?

1. Only simply supported beams
2. Cantilever, overhanging and simply supported beams
3. Fixed beams
4. Continuous beams

Options :

86435196983. 1

86435196984. 2

86435196985. 3

86435196986. 4

Question Number : 30 Question Id : 86435128134 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The slope of shear force line at any section of the beam is also called

1. bending moment at that section
2. rate of loading at that section
3. maximum shear force
4. maximum bending moment

Options :

86435196987. 1

86435196988. 2

86435196989. 3

86435196990. 4

Question Number : 31 Question Id : 86435128135 Question Type : MCQ Option Shuffling : No

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Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The concavity produced on the beam section about the centre line when downward force acts on it is called as

1. hogging or positive bending moment
2. hogging or negative bending moment
3. sagging or positive bending moment
4. sagging or negative bending moment

Options :

86435196991. 1

86435196992. 2

86435196993. 3

86435196994. 4

Question Number : 32 Question Id : 86435128136 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A concentrated load *P* acts on a simply supported beam of span *L* at a distance *L*/3 from the left support. The bending moment at the point of application of the load is given by

1. *PL*/3
2. 2*PL*/3
3. *PL*/9
4. 2*PL*/9

Options :

86435196995. 1

86435196996. 2

86435196997. 3

86435196998. 4

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Question Number : 33 Question Id : 86435128137 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The average shear stress in a beam of circular section is _____ times the maximum shear stress.

1. 0.75
2. 1.5
3. 4/3
4. equal

Options :

86435196999. 1

86435197000. 2

86435197001. 3

86435197002. 4

Question Number : 34 Question Id : 86435128138 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Flexible shafts have _____ rigidity in bending moment.

1. high
2. low
3. very high
4. extremely low

Options :

86435197003. 1

86435197004. 2

86435197005. 3

86435197006. 4

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Question Number : 35 Question Id : 86435128139 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

For plane stress conditions the number of independent stress components are

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

Options :

86435197007. 1

86435197008. 2

86435197009. 3

86435197010. 4

Question Number : 36 Question Id : 86435128140 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The plane stress condition can be applied to

1. thick element
2. thin element
3. 3D element
4. 3D thick element

Options :

86435197011. 1

86435197012. 2

86435197013. 3

86435197014. 4

Question Number : 37 Question Id : 86435128141 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

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Correct Marks : 4 Wrong Marks : 1

The plane strain condition can be applied to

1. thick element
2. thin element
3. 3D element
4. 3D thick element

Options :

86435197015. 1

86435197016. 2

86435197017. 3

86435197018. 4

Question Number : 38 Question Id : 86435128142 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In India, the average temperature of sewage is

1. 10 °C
2. 20 °C
3. 40 °C
4. 50 °C

Options :

86435197019. 1

86435197020. 2

86435197021. 3

86435197022. 4

Question Number : 39 Question Id : 86435128143 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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The wastewater from the kitchen is an example of

1. black water
2. yellow water
3. green water
4. grey water

Options :

86435197023. 1

86435197024. 2

86435197025. 3

86435197026. 4

Question Number : 40 Question Id : 86435128144 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

When the sewage becomes stronger, the turbidity of wastewater

1. increases
2. decreases
3. becomes constant
4. slightly decrease

Options :

86435197027. 1

86435197028. 2

86435197029. 3

86435197030. 4

Question Number : 41 Question Id : 86435128145 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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The type of solid which floats in sewage is

1. suspended solid
2. settleable solid
3. dissolved solid
4. total solid

Options :

86435197031. 1

86435197032. 2

86435197033. 3

86435197034. 4

Question Number : 42 Question Id : 86435128146 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The presence of which of the following indicates old pollution?

1. Nitrates
2. Nitrites
3. H_2S
4. Sulfates

Options :

86435197035. 1

86435197036. 2

86435197037. 3

86435197038. 4

Question Number : 43 Question Id : 86435128147 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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If the temperature of sewage increases, what will be the effect on the dissolved oxygen in sewage?

1. Remains constant
2. Increase
3. Decrease
4. No effect

Options :

86435197039. 1

86435197040. 2

86435197041. 3

86435197042. 4

Question Number : 44 Question Id : 86435128148 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

What is the minimum quantity of dissolved oxygen that should be present in the treated sewage?

1. 6 ppm
2. 4 ppm
3. 1 ppm
4. 10 ppm

Options :

86435197043. 1

86435197044. 2

86435197045. 3

86435197046. 4

Question Number : 45 Question Id : 86435128149 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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Partially oxidized sewage contains

1. nitrites and nitrates
2. nitrates and sulfur
3. sulfates and nitrates
4. nitrites and sulfur

Options :

86435197047. 1

86435197048. 2

86435197049. 3

86435197050. 4

Question Number : 46 Question Id : 86435128150 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following solid wastes describes the term 'Municipal solid waste'?

1. Toxic
2. Hazardous
3. Non-toxic
4. Non-hazardous

Options :

86435197051. 1

86435197052. 2

86435197053. 3

86435197054. 4

Question Number : 47 Question Id : 86435128151 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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Which of the following is done on an individual level?

1. Burning
2. Disposal
3. Recycling
4. Source reduction

Options :

86435197055. 1

86435197056. 2

86435197057. 3

86435197058. 4

Question Number : 48 Question Id : 86435128152 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following particles is called the particulate pollutants?

1. Ozone
2. Radon
3. Fly ash
4. Ethylene

Options :

86435197059. 1

86435197060. 2

86435197061. 3

86435197062. 4

Question Number : 49 Question Id : 86435128153 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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Which of the following statements is true about smog?

1. Smog is derived from the fog
2. Smog is derived from smoke
3. Smog is derived from water vapor
4. Smog is derived from both fog and smoke

Options :

86435197063. 1

86435197064. 2

86435197065. 3

86435197066. 4

Question Number : 50 Question Id : 86435128154 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

What is the permissible noise limit of 120 dB?

1. 30 minutes
2. 2 minutes
3. 1 minute
4. 30 seconds

Options :

86435197067. 1

86435197068. 2

86435197069. 3

86435197070. 4

Question Number : 51 Question Id : 86435128155 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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Noise pollution is created if the sound is in excess to

1. 70 dB–75 dB
2. 50 dB–60 dB
3. 80 dB–99 dB
4. 40 dB–65 dB

Options :

86435197071. 1

86435197072. 2

86435197073. 3

86435197074. 4

Question Number : 52 Question Id : 86435128156 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Fine-grained soils are sub-divided into

1. silt and clay
2. sand and clay
3. organic and silt
4. gravel and peat

Options :

86435197075. 1

86435197076. 2

86435197077. 3

86435197078. 4

Question Number : 53 Question Id : 86435128157 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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A soil is considered as coarse grained, if it retains more than _____ in a sieve.

1. 90% of the soil
2. 70% of the soil
3. 50% of the soil
4. 20% of the soil

Options :

86435197079. 1

86435197080. 2

86435197081. 3

86435197082. 4

Question Number : 54 Question Id : 86435128158 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Consolidation time of a soil sample

1. increases with an increase in permeability
2. increases with a decrease in compressibility
3. increases with a decrease in unit weight of water
4. increases with a decrease in permeability

Options :

86435197083. 1

86435197084. 2

86435197085. 3

86435197086. 4

Question Number : 55 Question Id : 86435128159 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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The permeability of soil varies

1. inversely as square of grain size
2. as square of grain size
3. as grain size
4. inversely as void ratio

Options :

86435197087. 1

86435197088. 2

86435197089. 3

86435197090. 4

Question Number : 56 Question Id : 86435128160 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The shear strength of a soil

1. is directly proportional to the angle of internal friction of the soil
2. is inversely proportional to the angle of internal friction of the soil
3. decreases with increase in normal stress
4. decreases with decrease in normal stress

Options :

86435197091. 1

86435197092. 2

86435197093. 3

86435197094. 4

Question Number : 57 Question Id : 86435128161 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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The expression for K_0 (coefficient of earth pressure at rest) as given by Jacky is

1. $K_0 = 1 - \sin \varphi$
2. $K_0 = \sin \varphi$
3. $K_0 = 1 - \cos \varphi$
4. $K_0 = 1 + \sin \varphi$

Options :

86435197095. 1

86435197096. 2

86435197097. 3

86435197098. 4

Question Number : 58 Question Id : 86435128162 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Immobilization of sulphur occurs in soil when C:S ratio is

1. < 300 : 1
2. > 300 : 1
3. > 400 : 1
4. > 200 : 1

Options :

86435197099. 1

86435197100. 2

86435197101. 3

86435197102. 4

Question Number : 59 Question Id : 86435128163 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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Denitrification is a process of

1. oxidation
2. reduction
3. hydration
4. carbonation

Options :

86435197103. 1

86435197104. 2

86435197105. 3

86435197106. 4

Question Number : 60 Question Id : 86435128164 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

When a pile hammer hits the pile , the total driving energy is equal to

1. weight of hammer times the height of drop
2. weight of the ram time times the height of the stroke
3. sum of the impact of the ram
4. sum of the impact of ram plus the energy delivered by explosion

Options :

86435197107. 1

86435197108. 2

86435197109. 3

86435197110. 4

Question Number : 61 Question Id : 86435128165 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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The dynamic formula is valueless for which of the following types of soil?

1. Loose sand soil
2. Saturated soil
3. Clay soil
4. Compacted soil

Options :

86435197111. 1

86435197112. 2

86435197113. 3

86435197114. 4

Question Number : 62 Question Id : 86435128166 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The peak microbial population was observed in soil generally after addition of residue

1. 3 weeks–4 weeks
2. 2 weeks–3 weeks
3. 3 days–4 days
4. 1 week–2 weeks

Options :

86435197115. 1

86435197116. 2

86435197117. 3

86435197118. 4

Question Number : 63 Question Id : 86435128167 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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The concept of analysis of bearing capacity failure was first developed by

1. Terzaghi
2. Meyerhof
3. Prandtl
4. Darcy

Options :

86435197119. 1

86435197120. 2

86435197121. 3

86435197122. 4

Question Number : 64 Question Id : 86435128168 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is not a type of matrix?

1. Square matrix
2. Scalar matrix
3. Trace matrix
4. Term matrix

Options :

86435197123. 1

86435197124. 2

86435197125. 3

86435197126. 4

Question Number : 65 Question Id : 86435128169 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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What is true regarding determinant of a matrix?

1. The concept of determinant is applicable to square matrices only
2. To find determinant, subtract diagonal elements together
3. Determinant is a vector value that can be computed from the elements of a trace matrix
4. Both 1 and 3

Options :

86435197127. 1

86435197128. 2

86435197129. 3

86435197130. 4

Question Number : 66 Question Id : 86435128170 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is the correct application for eigenvectors?

1. Computer vision
2. Physics
3. Machine learning
4. All of these

Options :

86435197131. 1

86435197132. 2

86435197133. 3

86435197134. 4

Question Number : 67 Question Id : 86435128171 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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Given the equations 4x+2y+z=8, x+ y+ z=3, 3x+y+3z=9. Find the values of x, y and z.

1. 5/3, 0, 2/3
2. 1, 2, 3
3. 4/3, 1/3, 5/3
4. 2, 3, 4

Options :

86435197135. 1

86435197136. 2

86435197137. 3

86435197138. 4

Question Number : 68 Question Id : 86435128172 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is the correct method to solve matrix equations?

1. Row echelon form
2. Inverse of a matrix
3. Both 1 and 2
4. None of these

Options :

86435197139. 1

86435197140. 2

86435197141. 3

86435197142. 4

Question Number : 69 Question Id : 86435128173 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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Which one of the following is not correct?

1. Order of matrix : If a matrix has 3 rows and 4 columns, order of the matrix is 3 × 4 i.e. row × column

2. Row matrix : A matrix consisting of only columns

3. Column matrix : The matrix which consists of only 1 column

4. Row matrix : A matrix consisting of only row

Options :

86435197143. 1

86435197144. 2

86435197145. 3

86435197146. 4

Question Number : 70 Question Id : 86435128174 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is equal to the maximum number of linearly independent row vectors in a matrix?

1. Row matrix

2. Rank of a matrix

3. Term matrix

4. Linear matrix

Options :

86435197147. 1

86435197148. 2

86435197149. 3

86435197150. 4

Question Number : 71 Question Id : 86435128175 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

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Correct Marks : 4 Wrong Marks : 1

What is the probability of getting sum 9 from two throws of a dice?

1. $\frac{1}{8}$
2. $\frac{1}{6}$
3. $\frac{1}{9}$
4. $\frac{1}{12}$

Options :

86435197151. 1

86435197152. 2

86435197153. 3

86435197154. 4

Question Number : 72 Question Id : 86435128176 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

1. $\frac{1}{2}$
2. $\frac{2}{5}$
3. $\frac{8}{15}$
4. $\frac{9}{20}$

Options :

86435197155. 1

86435197156. 2

86435197157. 3

86435197158. 4

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Question Number : 73 Question Id : 86435128177 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In a box, there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly. What is the probability that it is neither red nor green?

1. $\frac{1}{3}$
2. $\frac{3}{4}$
3. $\frac{7}{19}$
4. $\frac{9}{21}$

Options :

86435197159. 1

86435197160. 2

86435197161. 3

86435197162. 4

Question Number : 74 Question Id : 86435128178 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is correct roadway width for National Highway and State Highway (two lanes) as per IRC?

1. 7.5 m
2. 10 m
3. 12 m
4. 15 m

Options :

86435197163. 1

86435197164. 2

86435197165. 3

86435197166. 4

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Question Number : 75 Question Id : 86435128179 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A barrel camber for highway consists of

1. two straight slopes with a parabolic crown in the centre
2. a continuous curve either parabolic or elliptical
3. two straight slopes joining at the centre
4. None of these

Options :

86435197167. 1

86435197168. 2

86435197169. 3

86435197170. 4

Question Number : 76 Question Id : 86435128180 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

if radius of a horizontal curve is 80 m, design speed is 40 kmph and design coefficient of lateral friction is 0.15, then the rate of superelevation of full lateral friction will be

1. 0.0030
2. 0.0048
3. 0.0060
4. 0.0072

Options :

86435197171. 1

86435197172. 2

86435197173. 3

86435197174. 4

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Question Number : 77 Question Id : 86435128181 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The nominal size of ballast used for points and crossings is

1. 25 mm
2. 40 mm
3. 50 mm
4. 10 mm

Options :

86435197175. 1

86435197176. 2

86435197177. 3

86435197178. 4

Question Number : 78 Question Id : 86435128182 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following numbers of keys used in CST-9 sleeper?

1. 2
2. 3
3. 4
4. None of these

Options :

86435197179. 1

86435197180. 2

86435197181. 3

86435197182. 4

Question Number : 79 Question Id : 86435128183 Question Type : MCQ Option Shuffling : No

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Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

According to ICAO the slope of transitional surface at right angles to the centre line of runway, is kept

1. 1 in 4
2. 1 in 5
3. 1 in 6
4. 1 in 7

Options :

86435197183. 1

86435197184. 2

86435197185. 3

86435197186. 4

Question Number : 80 Question Id : 86435128184 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The distance between main gears is 10 m, and the distance of nose gear from centre of main gears is 30 m. If the angle of turning is 60°, the distance of centre of rotation from the nearer main gear is

1. 12.30 m
2. 11.30 m
3. 10.30 m
4. 9.30 m

Options :

86435197187. 1

86435197188. 2

86435197189. 3

86435197190. 4

Question Number : 81 Question Id : 86435128185 Question Type : MCQ Option Shuffling : No

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Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is incorrect?

1. In single engine aeroplanes, the engine is provided in the nose of the aircraft
2. In double engine aeroplanes, one engine on either wing is placed symmetrically
3. In three engine aeroplanes, two engines are placed on both wings and one engine is placed in the tail
4. None of these

Options :

86435197191. 1

86435197192. 2

86435197193. 3

86435197194. 4

Question Number : 82 Question Id : 86435128186 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is correct?

1. More the value of group index, less thickness of pavement will be required
2. More the value of CBR, greater thickness of pavement will be required
3. Minimum and maximum values of group index can be 0 and 20 respectively
4. All of these

Options :

86435197195. 1

86435197196. 2

86435197197. 3

86435197198. 4

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Question Number : 83 Question Id : 86435128187 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The maximum limit of water absorption for aggregate suitable for road construction is

1. 0.4%
2. 0.6%
3. 0.8%
4. 1.0%

Options :

86435197199. 1

86435197200. 2

86435197201. 3

86435197202. 4

Question Number : 84 Question Id : 86435128188 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The stress in pavement changes

1. daily
2. seasonally
3. annually
4. Depends on pavement

Options :

86435197203. 1

86435197204. 2

86435197205. 3

86435197206. 4

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Question Number : 85 Question Id : 86435128189 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The ratio of flexibility strength applied due to a load and the flexural stress is called

1. stress ratio
2. strain ratio
3. stress and strain ratio
4. bulk modulus

Options :

86435197207. 1

86435197208. 2

86435197209. 3

86435197210. 4

Question Number : 86 Question Id : 86435128190 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The maximum stress in summer by pavement is experienced at

1. morning
2. mid noon
3. evening
4. night

Options :

86435197211. 1

86435197212. 2

86435197213. 3

86435197214. 4

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Question Number : 87 Question Id : 86435128191 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is the output for land use pattern and road traffic furniture?

1. Spot speed
2. Traffic volume
3. Road inventory
4. Origin and destination

Options :

86435197215. 1

86435197216. 2

86435197217. 3

86435197218. 4

Question Number : 88 Question Id : 86435128192 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is correct while the speed of the traffic becomes maximum (i.e., free flow condition)?

1. Traffic density and volume become zero
2. Traffic density and volume become maximum
3. Traffic density becomes maximum and volume becomes zero
4. Traffic density becomes zero and volume becomes maximum

Options :

86435197219. 1

86435197220. 2

86435197221. 3

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86435197222. 4

Question Number : 89 Question Id : 86435128193 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is not required for determination of space mean speed?

1. Length of road section
2. Width of road section
3. Travel time
4. Number of vehicles

Options :

86435197223. 1

86435197224. 2

86435197225. 3

86435197226. 4

Question Number : 90 Question Id : 86435128194 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is correct for a brick moulded with rounded corners?

1. Bullnose brick
2. Queen closer
3. King closer
4. Beveled closer

Options :

86435197227. 1

86435197228. 2

86435197229. 3

86435197230. 4

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Question Number : 91 Question Id : 86435128195 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is correct?

1. The circular section of sewers provides maximum hydraulic mean depth
2. The circular sewers are provided for separate sewerage system
3. The circular sewers work efficiently if the sections run at least half full
4. All of the above

Options :

86435197231. 1

86435197232. 2

86435197233. 3

86435197234. 4

Question Number : 92 Question Id : 86435128196 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following information does not require an accident data collection report?

1. Identification of spots at which unusually high number of accidents happen
2. Development of a method that allows identification of risks before accidents occur
3. Comprehensive functional assessment of critical accident location to identify the causes of accidents
4. Development of parking areas

Options :

86435197235. 1

86435197236. 2

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86435197237. 3

86435197238. 4

Question Number : 93 Question Id : 86435128197 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is the method of reporting in accident studies?

1. Motorist accident report
2. Car accident report
3. Road accident report
4. Highway accident report

Options :

86435197239. 1

86435197240. 2

86435197241. 3

86435197242. 4

Question Number : 94 Question Id : 86435128198 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following informations do parking surveys not provide?

1. Data regarding availability of parking space
2. Data regarding the extent of its usage
3. Data regarding parking demand
4. Data regarding pedestrians path

Options :

86435197243. 1

86435197244. 2

86435197245. 3

86435197246. 4

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Question Number : 95 Question Id : 86435128199 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

What is the type of mistake which occurs when only one party in any contract is mistaken regarding the terms or subject-matter?

1. Mutual mistake
2. Unilateral mistake
3. Bilateral mistake
4. Individual mistake

Options :

86435197247. 1

86435197248. 2

86435197249. 3

86435197250. 4

Question Number : 96 Question Id : 86435128200 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is correct regarding horizontal distance obtaineds by thermometric observations?

1. Require slope correction
2. Require tension correction
3. Require slope and tension correction
4. Do not require slope and tension correction

Options :

86435197251. 1

86435197252. 2

86435197253. 3

86435197254. 4

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Question Number : 97 Question Id : 86435128201 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

While taking observations for the heights and distances, which method of surveying is used?

1. Chain surveying
2. Compass surveying
3. Plane surveying
4. Geodic surveying

Options :

86435197255. 1

86435197256. 2

86435197257. 3

86435197258. 4

Question Number : 98 Question Id : 86435128202 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A beam is defined as a structural member subjected to

1. axial loading
2. transverse loading
3. axial and transverse loading
4. None of the above

Options :

86435197259. 1

86435197260. 2

86435197261. 3

86435197262. 4

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Question Number : 99 Question Id : 86435128203 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The ratio of shearing stress to shearing strain within elastic limit, is known as

1. modulus of elasticity
2. shear modulus of elasticity
3. bulk modulus of elasticity
4. tangent modulus of elasticity

Options :

86435197263. 1

86435197264. 2

86435197265. 3

86435197266. 4

Question Number : 100 Question Id : 86435128204 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is correct when rocks are formed due to cooling of magma at a considerable depth from earth's surface?

1. Plutonic rocks
2. Hypabyssal rocks
3. Volcanic rocks
4. Igneous rocks

Options :

86435197267. 1

86435197268. 2

86435197269. 3

86435197270. 4

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