National Testing Agency

Question Paper Name :	PGQP57 16th Sept 2021 Shift 1
Subject Name :	PGQP57
Creation Date :	2021-09-16 14:44:30
Duration :	120
Total Marks :	400
Display Marks:	Yes

PGQP57

Group Number :	1
Group Id :	864351316
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 :	8643511174
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory

Question Number : 1 Question Id : 86435127305 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Select the correct word that can best complete the given sentence :

Marriages between members of extended family were _____ to strengthen the ties of relationship.

1. mentioned

2. promoted

3. indulged

4. performed

Options :

86435193671. 1

86435193672. 2

86435193673. 3

86435193674. 4

Question Number : 2 Question Id : 86435127306 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

From the choices given below, select the pair which exhibits the same relationship as the one in capitalized pair of words :

SOLDIER : REGIMENT

1. clown : circus

2. actor : troupe

3. dancer : ballet

4. instrument : musician

Options :

86435193675. 1

86435193676. 2

86435193677. 3

86435193678. 4

Question Number : 3 Question Id : 86435127307 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following is correctly spelt?

1. Surruptitious

2. Surepptitious

3. Surrepcitious

4. Surreptitious

Options :

86435193679. 1

86435193680. 2

86435193681. 3

86435193682. 4

Question Number : 4 Question Id : 86435127308 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following is nearest in meaning to the word 'EDIFY'?

    1.   Instruct

    2.   Satisfy

    3.   Amuse

    4.   Consume

Options :

86435193683. 1

86435193684. 2

86435193685. 3

86435193686. 4

Question Number : 5 Question Id : 86435127309 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

There was nobody to attend _____ the complaints of the passengers.

    1.   on

    2.   in

    3.   to

    4.   for

Options :

86435193687. 1

86435193688. 2

86435193689. 3

86435193690. 4

Question Number : 6 Question Id : 86435127310 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A post without remuneration is known as

    1.   voluntary

    2.   sinecure

    3.   sincere

    4.   honorary

Options :

86435193691. 1

86435193692. 2

86435193693. 3

86435193694. 4

Question Number : 7 Question Id : 86435127311 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Select the most suitable antonym :

        EXPEDITION

    1.   Silence

    2.   Explanation

    3.   Undertaking

    4.   Delay

Options :

86435193695. 1

86435193696. 2

86435193697. 3

86435193698. 4

Question Number : 8 Question Id : 86435127312 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Fill in the blanks with right words :

Lakshman was initially _____ at the suggestion but later started _____ it himself.

1. thrilled, negating

2. frowning, rejecting

3. impressed, negating

4. shocked, advocating

Options :

86435193699. 1

86435193700. 2

86435193701. 3

86435193702. 4

Question Number : 9 Question Id : 86435127313 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Identify the meaning of the idiom from the options given :

Miss the boat

1. let too much time go by to complete a task

2. long for something that you don't have

3. miss out on an opportunity

4. not know the difference between right and wrong

Options :

86435193703. 1

86435193704. 2

86435193705. 3

86435193706. 4

Question Number : 10 Question Id : 86435127314 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

These grapes _____ sour.

    1.   are testing

    2.   tasted

    3.   taste

    4.   have tested

Options :

86435193707. 1

86435193708. 2

86435193709. 3

86435193710. 4

Question Number : 11 Question Id : 86435127315 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In a certain code THRIVES is written as SIUHRDU. How is SOULFUL written in
that code?

    1.   VPTKKTE

    2.   VPTKETK

    3.   TPVKKTE

    4.   TNRKMVG

Options :

86435193711. 1

86435193712. 2

86435193713. 3

86435193714. 4

Question Number : 12 Question Id : 86435127316 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

What will come in place of the question mark (**?**) in the expression?

$$1050 \div 25 \times 51 - 1942 = ?$$

1. 152

2. 200

3. 252

4. 300

Options :

86435193715. 1

86435193716. 2

86435193717. 3

86435193718. 4

Question Number : 13 Question Id : 86435127317 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

There are five statues L, M, N, O and P each of them having different height. Statue L is smaller than only statue M. Statue O is smaller than statue N. Statue O is longer than statue P. The height of the tallest statue is 20 feet. The height of the second smallest statue is 11 feet. What will be the height of statue P?

1. 9 feet

2. 12 feet

3. 13 feet

4. 15 feet

Options :

86435193719. 1

86435193720. 2

86435193721. 3

86435193722. 4

Question Number : 14 Question Id : 86435127318 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Ashok started walking towards South. After walking 50 meters he took a right turn and walked 30 meters. He then took a right turn and walked 100 meters. He again took a right turn and walked 30 meters and stopped. How far he from the starting point?

1. 180 meters

2. 150 meters

3. 50 meters

4. None of these

Options :

86435193723. 1

86435193724. 2

86435193725. 3

86435193726. 4

Question Number : 15 Question Id : 86435127319 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The number, whose square is equal to the difference of the squares of the numbers 68 and 32, is

1. 36

2. 48

3. 60

4. 64

Options :

86435193727. 1

86435193728. 2

86435193729. 3

86435193730. 4

Question Number : 16 Question Id : 86435127320 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is not a prime number?

1. 31

2. 61

3. 71

4. 91

Options :

86435193731. 1

86435193732. 2

86435193733. 3

86435193734. 4

Question Number : 17 Question Id : 86435127321 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

1397 x 1397 = ?

1. 1981709

2. 1951609

3. 1836219

4. 1902179

Options :

86435193735. 1

86435193736. 2

86435193737. 3

86435193738. 4

Question Number : 18 Question Id : 86435127322 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

What least number must be added to 1056, so that the sum is completely divisible by 23?

    1.   21

    2.   18

    3.   3

    4.   2

Options :

86435193739. 1

86435193740. 2

86435193741. 3

86435193742. 4

Question Number : 19 Question Id : 86435127323 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Choose the correct answer :

      7845 - ? = 8461 - 3569

    1.   2953

    2.   2773

    3.   3569

    4.   2352

Options :

86435193743. 1

86435193744. 2

86435193745. 3

86435193746. 4

Question Number : 20 Question Id : 86435127324 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which country is called the 'Land of Fiords' ?

    1.   Sweden

    2.   Italy

    3.   Norway

    4.   Singapore

Options :

86435193747. 1

86435193748. 2

86435193749. 3

86435193750. 4

Question Number : 21 Question Id : 86435127325 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The biggest part of the brain is

    1.   cerebrum

    2.   spinal cord

    3.   cerebellum

    4.   brain stem

Options :

86435193751. 1

86435193752. 2

86435193753. 3

86435193754. 4

Question Number : 22 Question Id : 86435127326 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Name the person who was also known as 'Deshbandhu'.

    1.   S. Radhakrishnan

    2.   G. K. Gokhale

    3.   Chittaranjan Das

    4.   A. P. J. Abdul Kalam

Options :

86435193755. 1

86435193756. 2

86435193757. 3

86435193758. 4

Question Number : 23 Question Id : 86435127327 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Who is known as 'The Saint of Gutters'?

    1.   Baba Amte

    2.   Anna Hazare

    3.   Mother Teresa

    4.   None of these

Options :

86435193759. 1

86435193760. 2

86435193761. 3

86435193762. 4

Question Number : 24 Question Id : 86435127328 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Garampani Sanctuary is located at

    1.   Junagarh, Gujarat

    2.   Diphu, Assam

    3.   Kohima, Nagaland

    4.   Gangtok, Sikkim

Options :

86435193763. 1

86435193764. 2

86435193765. 3

86435193766. 4

Question Number : 25 Question Id : 86435127329 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The National Rural Health Mission has been launched in the country in _____.

    1.   2003

    2.   2005

    3.   2007

    4.   2009

Options :

86435193767. 1

86435193768. 2

86435193769. 3

Part B-Water Engineering and Management

Section Id :	8643511175
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 :	8643511408
Question Shuffling Allowed :	Yes

Question Number : 26 Question Id : 86435127330 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If the wheat requires about 7.5 cm of water after every 28 days, and the base period for wheat is 140 days, then the approximate duty is

1. 6225 hectares/cumec

2. 3226 hectares/cumec

3. 864 hectares/cumec

4. 4126 hectares/cumec

Options :

86435193771. 1

86435193772. 2

86435193773. 3

86435193774. 4

Question Number : 27 Question Id : 86435127331 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

10 cumec of water is delivered to a 32 hectare field for 4 hours. After irrigation, it was observed that 0.30 m of water has been stored in the root zone. The water application efficiency is

   1.   96.67%

   2.   70.68%

   3.   66.67%

   4.   58.58%

Options :

86435193775. 1

86435193776. 2

86435193777. 3

86435193778. 4

Question Number : 28 Question Id : 86435127332 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Two and half centimetres of rain per day over an area of 200 km^2 is equivalent to average rate of input of how many cubic metres per second of water to that area?

   1.   57.87

   2.   87.58

   3.   25

   4.   50

Options :

86435193779. 1

86435193780. 2

86435193781. 3

86435193782. 4

Question Number : 29 Question Id : 86435127333 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A watershed has an area of 300 ha. Due to a 10 cm rainfall event over the watershed, a stream flow is generated and at the outlet of the watershed it lasts for 10 hours. Assuming a runoff/rainfall ratio of 0.20 for this event, the average stream flow rate at the outlet in this period of 10 hours is

1. 1.33 m³/s
2. 1.67 m³/s
3. 1.85 m³/s
4. 60000 m³/h

Options :

86435193783. 1

86435193784. 2

86435193785. 3

86435193786. 4

Question Number : 30 Question Id : 86435127334 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The normal annual rainfall at stations A, B and C situated in meteorologically homogeneous region are 175 cm, 180 cm and 150 cm, respectively. In the year 2020, station B was inoperative and station A and C recorded annual precipitation of 150 cm and 135 cm, respectively. The annual rainfall at station B in that year could be estimated to be nearly

1. 150 cm
2. 143 cm
3. 158 cm
4. 168 cm

Options :

86435193787. 1

86435193788. 2

86435193789. 3

86435193790. 4

Question Number : 31 Question Id : 86435127335 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A study of the isopluvial maps revealed that at Ranchi, a maximum rainfall depth of 200 mm in 12 h has a return period of 50 years. The probability of 12 h rainfall equal to or greater than 200 mm occurring at Ranchi at least once in 30 years is

  1.   0.45

  2.   0.60

  3.   0.56

  4.   1.0

Options :

86435193791. 1

86435193792. 2

86435193793. 3

86435193794. 4

Question Number : 32 Question Id : 86435127336 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The probability of a 10 cm rain in 1 hour occurring at station B is found to be 1/60. What is the probability that a 1 hour rain of magnitude 10 cm or larger will occur in station B once in 30 successive years?

  1.   0.396

  2.   0.307

  3.   0.604

  4.   0.50

Options :

86435193795. 1

86435193796. 2

86435193797. 3

86435193798. 4

Question Number : 33 Question Id : 86435127337 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The infiltration process at capacity rates in a soil is described by Kostiakov's equation as $F_p = 3.0t^{0.70}$, where F_p is cumulative infiltration in cm and t is times in hours. The infiltration capacity at 2.0 h and 3.0 h from the start of infiltration will be

    1.   1.28, 1.18 cm/h

    2.   3.42, 3.10 cm/h

    3.   1.70, 1.51 cm/h

    4.   0.85, 0.62 cm/h

Options :

86435193799. 1

86435193800. 2

86435193801. 3

86435193802. 4

Question Number : 34 Question Id : 86435127338 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The mass curve of rainfall of duration 100 min is given below. The catchment had an initial loss of 0.60 cm and a φ -index of 0.60 cm/h.

Time from start of rainfall (min)	: 0	20	40	60	80	100
Cumulative rainfall (cm)	: 0	0.5	1.2	2.6	3.3	3.5

The total surface runoff from the catchment will be

    1.   2.80 cm

    2.   2.50 cm

    3.   3.45 cm

    4.   1.50 cm

Options :

86435193803. 1

86435193804. 2

86435193805. 3

86435193806. 4

Question Number : 35 Question Id : 86435127339 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Minimum size of the particles of silt soil is

1.   0.002 mm

2.   0.04 mm

3.   0.06 mm

4.   0.08 mm

Options :

86435193807. 1

86435193808. 2

86435193809. 3

86435193810. 4

Question Number : 36 Question Id : 86435127340 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The frictional resistance for fluids in motion is

1.   inversely proportional to the square of the surface area of contact

2.   inversely proportional to the surface area of contact

3.   proportional to the square of the surface area of contact

4.   proportional to the surface area of contact

Options :

86435193811. 1

86435193812. 2

86435193813. 3

86435193814. 4

Question Number : 37 Question Id : 86435127341 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A rectangular orifice of 2 m width and 1.2 m deep is fitted in one side of large tank. The easier level on one side of the orifice is 3 m above the top edge of the orifice while on the other side of the orifice, the water level is 0.5 m below its top edge. If C_d = 0.64, the discharge is

1. 4.95 m³/s
2. 5.67 m³/s
3. 3.56 m³/s
4. 6.75 m³/s

Options :

86435193815. 1

86435193816. 2

86435193817. 3

86435193818. 4

Question Number : 38 Question Id : 86435127342 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The velocity vector in a fluid is given as $v = 5x^4 + 3y^2 + 2z$ (in metre/sec). What is the acceleration of it at point (1,3,4)?

1. 40 m/s²
2. 20 m/s²
3. 60 m/s²
4. 80 m/s²

Options :

86435193819. 1

86435193820. 2

86435193821. 3

86435193822. 4

Question Number : 39 Question Id : 86435127343 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The density of wooden block is 850 kg/m³ and its length 7.0 m. The position of centre of buoyancy for a wooden block of width 3.5 m and depth 1 m, when it floats horizontally in water, is

    1.   0.95

    2.   0.85

    3.   1.05

    4.   1.65

Options :

86435193823. 1

86435193824. 2

86435193825. 3

86435193826. 4

Question Number : 40 Question Id : 86435127344 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A circular opening, 6 m diameter, in a vertical side of a tank is closed by a disc of 6 m diameter which can rotate about a horizontal diameter. The centre of circular opening is at the depth of 5 m. The force on the disc is

    1.   1.38 MN

    2.   2.76 MN

    3.   5.54 MN

    4.   7.85 MN

Options :

86435193827. 1

86435193828. 2

86435193829. 3

86435193830. 4

Question Number : 41 Question Id : 86435127345 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

What will be the diameter (in mm) of a water droplet, if the pressure inside which is 0.05 N/cm² greater than the outside pressure? (Take surface tension as 0.075 N/m).

1. 3

2. 0.3

3. 0.6

4. 6

Options :

86435193831. 1

86435193832. 2

86435193833. 3

86435193834. 4

Question Number : 42 Question Id : 86435127346 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A block of material of specific gravity 0.45 floats in water. If its size is 3 m × 2 m × 0.8 m, the meta-centric height of the block is

1. 0.506 m

2. 0.376 m

3. 1.012 m

4. 0.127 m

Options :

86435193835. 1

86435193836. 2

86435193837. 3

86435193838. 4

Question Number : 43 Question Id : 86435127347 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A tri-axial shear test is preferred to direct shear test, because

1. It can be performed under all three drainage conditions with complete control

2. Precise measurement of pore pressure and change in volume during test, is not possible

3. Stress distribution on the failure plane, is non-uniform

4. None of the above

Options :

86435193839. 1

86435193840. 2

86435193841. 3

86435193842. 4

Question Number : 44 Question Id : 86435127348 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Toughness index is defined as the ratio of

1. plasticity index to flow index

2. plasticity index to consistency index

3. liquidity index to flow index

4. None of the above

Options :

86435193843. 1

86435193844. 2

86435193845. 3

86435193846. 4

Question Number : 45 Question Id : 86435127349 Question Type : MCQ Option Shuffling : No

A 30 cm well completely penetrates an artesian aquifer. The length of the strainer is 25 m. The coefficient of permeability of the aquifer is 45 m/day and radius of influence is 350 m. If the drawdown at the pumping well is 4 m, the discharge from the well is

    1.   2584 liters/minute

    2.   2382 liters/minute

    3.   3000 liters/minute

    4.   2532 liters/minute

Options :

86435193847. 1

86435193848. 2

86435193849. 3

86435193850. 4

Question Number : 46 Question Id : 86435127350 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

During a recuperation test, the water in an open well as depressed by pumping by 2.5 m, it recuperated 1.8 m in 80 minutes. The yield from a well of 4.0 m diameter under a depression head of 3.0 m is

    1. $42 \text{ m}^3/\text{h}$

    2. $32 \text{ m}^3/\text{h}$

    3. $36 \text{ m}^3/\text{h}$

    4. $46 \text{ m}^3/\text{h}$

Options :

86435193851. 1

86435193852. 2

86435193853. 3

86435193854. 4

Question Number : 47 Question Id : 86435127351 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A regime channel has a discharge of 50 cumecs and silt factor of 1.1. Using the Lacey's theory, the hydraulic mean depth is

　　1.　2.824 m

　　2.　1.675 m

　　3.　0.872 m

　　4.　1.987 m

Options :

86435193855. 1

86435193856. 2

86435193857. 3

86435193858. 4

Question Number : 48 Question Id : 86435127352 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In the equation of critical velocity $V_0 = 0.55my^{0.64}$, what is m?

　　1.　Particle size in mm

　　2.　Shear stress ratio

　　3.　Critical velocity ratio

　　4.　Critical strain ratio

Options :

86435193859. 1

86435193860. 2

86435193861. 3

86435193862. 4

Question Number : 49 Question Id : 86435127353 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A flow is called hypersonic if the Mach number is

1. less than unity

2. unity

3. between 1 and 5

4. None of these

Options :

86435193863. 1

86435193864. 2

86435193865. 3

86435193866. 4

Question Number : 50 Question Id : 86435127354 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The project life cycle consists of

1. Understanding the scope of the project

2. Objectives of the project

3. Formulation and planning various activities

4. All of these

Options :

86435193867. 1

86435193868. 2

86435193869. 3

86435193870. 4

Question Number : 51 Question Id : 86435127355 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Five dimensions that must be managed on a project are

1. Constraint, Quality, Cost, Schedule, Staff

2. Features, Quality, Cost, Schedule, Staff

3. Features, Priority, Cost, Schedule, Staff

4. Features, Quality, Cost, Schedule, Customer

Options :

86435193871. 1

86435193872. 2

86435193873. 3

86435193874. 4

Question Number : 52 Question Id : 86435127356 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Project performance consists of

1. time

2. cost

3. quality

4. All of these

Options :

86435193875. 1

86435193876. 2

86435193877. 3

86435193878. 4

Question Number : 53 Question Id : 86435127357 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The entire process of a project may be considered to be made up on number of
sub-process placed in different stages called the

1. Technical key resources

2. Work key structure

3. Work Breakdown Structure (WBS)

4. None of these

Options :

86435193879. 1

86435193880. 2

86435193881. 3

86435193882. 4

Question Number : 54 Question Id : 86435127358 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following is / are the component(s) of risk management?

1. Risk Assessment

2. Risk Control

3. Risk Ranking

4. All of these

Options :

86435193883. 1

86435193884. 2

86435193885. 3

86435193886. 4

Question Number : 55 Question Id : 86435127359 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Controlling the changes in the project may affect

1. The progress of the project

2. Stage cost

3. Project scope

4. All of these

Options :

86435193887. 1

86435193888. 2

86435193889. 3

86435193890. 4

Question Number : 56 Question Id : 86435127360 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Dummy activities consume

1. time

2. resources

3. None of these

4. Both 1 and 2

Options :

86435193891. 1

86435193892. 2

86435193893. 3

86435193894. 4

Question Number : 57 Question Id : 86435127361 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In the initial stage of the project, the probability of completing the project is

1. zero

2. high

3. low

4. Any of these

Options :

86435193895. 1

86435193896. 2

86435193897. 3

86435193898. 4

Question Number : 58 Question Id : 86435127362 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The probability of completing the project can be estimated based upon the

1. Uniform distribution curve

2. Normal distribution curve

3. U-shaped distribution curve

4. None of these

Options :

86435193899. 1

86435193900. 2

86435193901. 3

86435193902. 4

Question Number : 59 Question Id : 86435127363 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Contour interval on a map sheet denotes

1. Vertical distance of contour lines above the datum plane

2. Vertical distance between two successive contour lines

3. Slope distance between two successive contour lines

4. Horizontal distance between two successive contour lines

Options :

86435193903. 1

86435193904. 2

86435193905. 3

86435193906. 4

Question Number : 60 Question Id : 86435127364 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The representative fraction 1/2500 means that the scale is 1 cm equal to

1. 0.25 m

2. 2.5 km

3. 25 m

4. 2.5 km

Options :

86435193907. 1

86435193908. 2

86435193909. 3

86435193910. 4

Question Number : 61 Question Id : 86435127365 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following specifications for length of base line refers to 'Third Order Triangulation System'?

1. 0.5 to 3 km

2. 1.5 to 5 km

3. 5 to 15 km

4. 10 to 20 km

Options :

86435193911. 1

86435193912. 2

86435193913. 3

86435193914. 4

Question Number : 62 Question Id : 86435127366 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A sewer is laid from a manhole *A* to a manhole *B*, 250 m apart along a downward gradient of 1 in 125. If reduced level of the invert at *A* is 205.75 m and the height of the boning rod is 3 m, then reduced level of the sight rail at B, is

1. 202.75 m

2. 206.75 m

3. 208.75 m

4. 211.75 m

Options :

86435193915. 1

86435193916. 2

86435193917. 3

86435193918. 4

Question Number : 63 Question Id : 86435127367 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A Dumpy level is set up with its eye piece vertically over a peg A. The height from the top of peg A to the center of the eyepiece is 1.540 m and the reading on peg B is 0.705 m. The level is then set up over peg B. If height of the eyepiece above peg B is 1.490 m and reading on A is 2.195 m, then difference in level between A and B is

1. 2.900 m
2. 3.030 m
3. 0.770 m
4. 0.785 m

Options :

86435193919. 1

86435193920. 2

86435193921. 3

86435193922. 4

Question Number : 64 Question Id : 86435127368 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If staff intercept on a staff located at 100 m from the level for five division deviation of the bubble is 0.050 m and if length of one division of the bubble is 2 mm, then radius of curvature of the bubble tube is

1. 2.02 m
2. 2.20 m
3. 20.0 m
4. 20.20 m

Options :

86435193923. 1

86435193924. 2

86435193925. 3

86435193926. 4

Question Number : 65 Question Id : 86435127369 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A plot of land 60 m x 20 m is measured by a steel tape. If the standard error of length and width measurements is taken as ± 1 cm, then standard error of the area of the plot will be

    1. $\pm 0.1414 \ m^2$

    2. $\pm 0.566 \ m^2$

    3. $\pm 0.632 \ m^2$

    4. $\pm 0.8484 \ m^2$

Options :

86435193927. 1

86435193928. 2

86435193929. 3

86435193930. 4

Question Number : 66 Question Id : 86435127370 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The type of surveying in which curvature of the earth is taken into account is called

    1.   Geodetic surveying

    2.   Plane surveying

    3.   Preliminary surveying

    4.   Topographical surveying

Options :

86435193931. 1

86435193932. 2

86435193933. 3

86435193934. 4

Question Number : 67 Question Id : 86435127371 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If cross sectional areas of an embankment at 30 m intervals are 20, 40, 60, 50, and 30 m² respectively, then volume of the embankment on the basis of prismoidal rule is

    1.   5300 m³

    2.   8300 m³

    3.   9300 m³

    4.   9400 m³

Options :

86435193935. 1

86435193936. 2

86435193937. 3

86435193938. 4

Question Number : 68 Question Id : 86435127372 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The process of determining locations of the instrument station by drawing resectors from the locations of the known stations is called

    1.   Radiation

    2.   Intersection

    3.   Resection

    4.   Traversing

Options :

86435193939. 1

86435193940. 2

86435193941. 3

86435193942. 4

Question Number : 69 Question Id : 86435127373 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

From Rankine's hypothesis, Rankine criteria for failure of brittle material is

    1.   Maximum principal stress

    2.   Maximum strain energy

    3.   Maximum shear stress

    4.   Maximum shear strain energy

Options :

86435193943. 1

86435193944. 2

86435193945. 3

86435193946. 4

Question Number : 70 Question Id : 86435127374 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If an element is subjected to pure shearing stress τ, then maximum principal stress is equal to

    1. 2τ

    2. $\tau/2$

    3. τ

    4. $\sqrt{(1-\tau^2)}$

Options :

86435193947. 1

86435193948. 2

86435193949. 3

86435193950. 4

Question Number : 71 Question Id : 86435127375 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A brittle material of 4 cm² cross section carries an axial tensile load of 20 t. What will be the maximum shear stress in the block?

1. 2500 kg/cm²

2. 1000 kg/cm²

3. 500 kg/cm²

4. 1500 kg/cm²

Options :

86435193951. 1

86435193952. 2

86435193953. 3

86435193954. 4

Question Number : 72 Question Id : 86435127376 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

What will be the relation between E (Young's modulus of elasticity) and bulk modulus K, when μ (Poisson's ratio) = 0.25?

1. $E = K$

2. $E = 2K$

3. $E = 1.5K$

4. $E = K = 0$

Options :

86435193955. 1

86435193956. 2

86435193957. 3

86435193958. 4

Question Number : 73 Question Id : 86435127377 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If an element of a stressed body is in a state of pure shear with a magnitude of 40 N/mm^2, then magnitude of maximum principal stress at that location is

1. 80 N/mm^2

2. 40 N/mm^2

3. 60 N/mm^2

4. 20 N/mm^2

Options :

86435193959. 1

86435193960. 2

86435193961. 3

86435193962. 4

Question Number : 74 Question Id : 86435127378 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The bending moment for a certain portion of the beam is constant. For that section, shear force would be

1. zero

2. increasing

3. decreasing

4. constant

Options :

86435193963. 1

86435193964. 2

86435193965. 3

86435193966. 4

Question Number : 75 Question Id : 86435127379 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

An increase in load at the free end of a cantilever is likely to cause failure

  1.   at the free end

  2.   at the mid of its length

  3.   at the fixed support end

  4.   anywhere on the beam

Options :

86435193967. 1

86435193968. 2

86435193969. 3

86435193970. 4

Question Number : 76 Question Id : 86435127380 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A solid circular shaft is subjected to pure torsion. The ratio of maximum shear to maximum normal stress at any point would be

  1.   1 : 1

  2.   1 : 2

  3.   2 : 1

  4.   2 : 3

Options :

86435193971. 1

86435193972. 2

86435193973. 3

86435193974. 4

Question Number : 77 Question Id : 86435127381 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A thin cylinder contains fluid at a pressure of 500 N/m², internal diameter of the shell is 0.6 m and tensile stress in the material is to be limited to 9000 N/m². The shell must have a minimum wall thickness of nearly

1. 9 mm

2. 11 mm

3. 17 mm

4. 21 mm

Options :

86435193975. 1

86435193976. 2

86435193977. 3

86435193978. 4

Question Number : 78 Question Id : 86435127382 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The ratio of Young's modulus to modulus of rigidity for a material having Poisson's ratio 0.2 is

1. 12/5

2. 5/12

3. 5/14

4. 14/5

Options :

86435193979. 1

86435193980. 2

86435193981. 3

86435193982. 4

Question Number : 79 Question Id : 86435127383 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The plasticity index, PI is defined as

    1.   difference between the liquid limit and the plastic limit of a soil

    2.   addition of liquid limit and the plastic limit of a soil

    3.   addition of liquid limit and the flow index of a soil

    4.   difference of liquid limit and the flow index of a soil

Options :

86435193983. 1

86435193984. 2

86435193985. 3

86435193986. 4

Question Number : 80 Question Id : 86435127384 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The uniformity coefficient C_u is defined as

    1. $\dfrac{D_{60}}{D_{10}}$

    2. $\dfrac{D_{10}}{D_{60}}$

    3. $\dfrac{D_{40}}{D_{10}}$

    4. $\dfrac{D_{60}}{D_{20}}$

Options :

86435193987. 1

86435193988. 2

86435193989. 3

86435193990. 4

Question Number : 81 Question Id : 86435127385 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

For a soil in natural state, given $e = 0.8$, $w = 24\%$ and specific gravity of soil solid, $G_s = 2.68$, the dry unit weight is

1.   12.98 kN/m^3

2.   10.28 kN/m^3

3.   14.61 kN/m^3

4.   24 kN/m^3

Options :

86435193991. 1

86435193992. 2

86435193993. 3

86435193994. 4

Question Number : 82 Question Id : 86435127386 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A 2.0 m wide rectangular channel carries water at 20^{0}C at a depth of 0.50m. The channel is laid on a slope of 0.0004. Take γ as 9790 N/m^3 and ρ as 998 kg/m^3. The shear velocity is

1.   0.50 m/s

2.   0.0256 m/s

3.   0.0004 m/s

4.   0.03616 m/s

Options :

86435193995. 1

86435193996. 2

86435193997. 3

86435193998. 4

Question Number : 83 Question Id : 86435127387 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

For a flow of water in a rectangular channel of 4.0 m width and depth of flow of 2.25 m, the Darcy-Weisbach friction factor f is 0.02. The Chezy's coefficient C is

1. 62.6

2. 58.6

3. 25.4

4. 10.58

Options :

86435193999. 1

86435194000. 2

86435194001. 3

86435194002. 4

Question Number : 84 Question Id : 86435127388 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The Darcy-Weisbach f is related to Manning's n as

1. $f = \dfrac{8gn^2}{R^{1/3}}$

2. $f = \dfrac{8n^2}{R^{1/3}}$

3. $f = \dfrac{R^{1/3}}{8gn^2}$

4. $f = \dfrac{64ng}{R^{1/3}}$

Options :

86435194003. 1

86435194004. 2

86435194005. 3

86435194006. 4

Question Number : 85 Question Id : 86435127389 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The normal depth of flow in most efficient circular concrete section laid on a bed slope of 0.005 is 0.50 m. Take $n = 0.014$, $y_{em} = 0.5$. The estimated discharge is

1.   2.587 m^3/s

2.   0.787 m^3/s

3.   0.852 m^3/s

4.   0.502 m^3/s

Options :

86435194007. 1

86435194008. 2

86435194009. 3

86435194010. 4

Question Number : 86 Question Id : 86435127390 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If the critical drought of record, as determined from 40 years of hydrologic data, lasted 5 years, what is the chance that a more severe drought will occur during the next 20 years?

1.   0.308

2.   0.523

3.   0.208

4.   0.901

Options :

86435194011. 1

86435194012. 2

86435194013. 3

86435194014. 4

Question Number : 87 Question Id : 86435127391 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A culvert has an expected life of 10 years. If the acceptable risk of at least one event exceeding the culvert capacity during the design life is 10%, what design return period should be used?

    1.   100 years

    2.   45 years

    3.   65 years

    4.   95 years

Options :

86435194015. 1

86435194016. 2

86435194017. 3

86435194018. 4

Question Number : 88 Question Id : 86435127392 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If a watershed has 140 as total number of streams of first order and 45 as total number of streams of second order, the bifurcation ratio of the watershed is

    1.   3.25

    2.   45

    3.   3.11

    4.   140

Options :

86435194019. 1

86435194020. 2

86435194021. 3

86435194022. 4

Question Number : 89 Question Id : 86435127393 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If the total length of the stream segment in a watershed is 4000 m and the area of the watershed is 5 km^2, the drainage density is

1. 800

2. 8×10^{-4} m/m^2

3. 8×10^{-6} m/m^2

4. 8×10^4 m/m^2

Options :

86435194023. 1

86435194024. 2

86435194025. 3

86435194026. 4

Question Number : 90 Question Id : 86435127394 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A dam has an expected working life of 25 years and is designed for a peak flood of 100 years return period. The risk of failure of this dam is

1. 0.55

2. 0.66

3. 0.33

4. 0.22

Options :

86435194027. 1

86435194028. 2

86435194029. 3

86435194030. 4

Question Number : 91 Question Id : 86435127395 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A small watershed has hydrologic soil group *C* (Curve Number 79) and fair pasture cover. The rainfall recorded as 8.0 cm. The direct runoff from the watershed for average condition of soil, cover and antecedent moisture is

1. 4.50 cm

2. 3.85 cm

3. 5.25 cm

4. 3.30 cm

Options :

86435194031. 1

86435194032. 2

86435194033. 3

86435194034. 4

Question Number : 92 Question Id : 86435127396 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The ratio of the quantity of water stored in the root zone of the crop to the quantity of water actually delivered into the field is called

1. water storage efficiency

2. water conveyance efficiency

3. water application efficiency

4. water distribution efficiency

Options :

86435194035. 1

86435194036. 2

86435194037. 3

86435194038. 4

Question Number : 93 Question Id : 86435127397 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The loss of head per unit length of creep is called

1. coefficient of creep

2. percolation coefficient

3. lane's coefficient

4. None of the above

Options :

86435194039. 1

86435194040. 2

86435194041. 3

86435194042. 4

Question Number : 94 Question Id : 86435127398 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The hydraulic mean depth for a circular pipe of diameter d is

1. $d/6$

2. $d/4$

3. $d/2$

4. d

Options :

86435194043. 1

86435194044. 2

86435194045. 3

86435194046. 4

Question Number : 95 Question Id : 86435127399 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The total energy line over the hydraulic gradient line by an amount equal to

1. pressure head

2. velocity head

3. pressure head + velocity head

4. datum head + pressure head

Options :

86435194047. 1

86435194048. 2

86435194049. 3

86435194050. 4

Question Number : 96 Question Id : 86435127400 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In a sub-critical flow as the specific energy in a channel is decreased, the depth of flow

1. also decreases

2. increases

3. does not vary

4. None of the above

Options :

86435194051. 1

86435194052. 2

86435194053. 3

86435194054. 4

Question Number : 97 Question Id : 86435127401 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

At a certain point in an unconfined aquifer of 3 km² area. The water table was at an elevation of 102.00 m. Due to natural recharge in a wet season, its level rose to 103.20 m. A volume of 1.5 Mm³ of water was then pumped out of the aquifer causing the water table to reach a level of 101.20 m. The specific yield of the aquifer is

1. 0.25

2. 0.35

3. 0.45

4. 0.55

Options :

86435194055. 1

86435194056. 2

86435194057. 3

86435194058. 4

Question Number : 98 Question Id : 86435127402 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A field test for permeability consists in observing the time required for a tracer to travel between two observation wells. A tracer was found to take 10 h to travel between two wells 50 m apart when the difference in water surface elevation in them was 0.50 m. The coefficient of permeability of the aquifer is

1. 5.25 cm/s

2. 4.17 cm/s

3. 3.28 cm/s

4. 8.26 cm/s

Options :

86435194059. 1

86435194060. 2

86435194061. 3

86435194062. 4

Question Number : 99 Question Id : 86435127403 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Hydrograph is a graphical representation of

    1.   surface run-off

    2.   groundwater flow

    3.   discharge flowing in the river

    4.   None of these

Options :

86435194063. 1

86435194064. 2

86435194065. 3

86435194066. 4

Question Number : 100 Question Id : 86435127404 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The best process of disinfection of public water supply, is by

    1.   boiling

    2.   chlorination

    3.   adding lime

    4.   adding ozone

Options :

86435194067. 1

86435194068. 2

86435194069. 3

86435194070. 4