

National Testing Agency

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| Question Paper Name : | Irrigation Water Management Engineering or Irrigation and Drainage 23rd Sep 2020 Shift 2 Set 2 |
| Subject Name : | Irrigation Water Management Engineering or Irrigation and Drainage Engineering |
| Creation Date : | 2020-09-23 19:33:42 |
| Duration : | 120 |
| Total Marks : | 480 |
| Display Marks: | Yes |
| Share Answer Key With Delivery Engine : | Yes |
| Actual Answer Key : | Yes |

Irrigation Water Management Engineering or Irrigation and Drainage Engineering

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|--------------------------------------|----------|
| Group Number : | 1 |
| Group Id : | 71087046 |
| 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 |

Part A: General Knowledge

| | |
|-------------------------|-----------|
| Section Id : | 710870136 |
| Section Number : | 1 |
| Section type : | Online |

| | |
|--|-----------|
| Mandatory or Optional : | Mandatory |
| Number of Questions : | 20 |
| Number of Questions to be attempted : | 20 |
| Section Marks : | 80 |
| Display Number Panel : | Yes |
| Group All Questions : | Yes |
| Mark As Answered Required? : | Yes |
| Sub-Section Number : | 1 |
| Sub-Section Id : | 710870136 |
| Question Shuffling Allowed : | Yes |

Question Number : 1 Question Id : 7108705461 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 crops is a commercial crop in Punjab and Haryana but is a subsistence crop in Orissa?

1. Tea
2. Cotton
3. Rubber
4. Rice

Options :

- 71087021841. 1
- 71087021842. 2
- 71087021843. 3
- 71087021844. 4

Question Number : 2 Question Id : 7108705462 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 are the two most important wheat-growing zones of the country?

- A. Ganga-Satluj plains in the north-west
- B. Deltaic regions
- C. Black soil region of the Deccan
- D. Plains of north-east

Choose the **correct** answer from the options below:

- 1. Only A and B
- 2. Only B and C
- 3. Only C and D
- 4. Only A and C

Options :

- 71087021845. 1
- 71087021846. 2
- 71087021847. 3
- 71087021848. 4

Question Number : 3 Question Id : 7108705463 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

Indian agriculture is typically characterized as

- 1. Land surplus, labour scarce economy
- 2. Land surplus, labour surplus economy
- 3. Land scarce, labour surplus economy
- 4. Land scarce, labour scarce economy

Options :

- 71087021849. 1

71087021850. 2

71087021851. 3

71087021852. 4

Question Number : 4 Question Id : 7108705464 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 countries is the main rival of India in tea export?

1. China
2. Japan
3. Germany
4. Sri Lanka

Options :

71087021853. 1

71087021854. 2

71087021855. 3

71087021856. 4

Question Number : 5 Question Id : 7108705465 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 A: MSP is declared by the government every year to provide incentives to the farmers for raising the production of crops.

Statement B: Buffer stock is created to distribute food grains in the deficit areas and among the poorer strata of the society at the lower price than the market price.

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

1. Both Statement A and Statement B are correct
2. Both Statement A and Statement B are incorrect
3. Statement A is correct but Statement B is incorrect
4. Statement A is incorrect but Statement B is correct

Options :

71087021857. 1

71087021858. 2

71087021859. 3

71087021860. 4

Question Number : 6 Question Id : 7108705466 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 global association of nations of the world to help cooperation in international law, security, economic development and social equity?

1. United Nations Organization
2. International Monetary Fund
3. World Bank
4. World Health Organization

Options :

- 71087021861. 1
- 71087021862. 2
- 71087021863. 3
- 71087021864. 4

Question Number : 7 Question Id : 7108705467 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

Under the Ganga Action Plan Phase II, pollution abatement works are being taken up in how many towns?

- 1. 57
- 2. 65
- 3. 52
- 4. 69

Options :

- 71087021865. 1
- 71087021866. 2
- 71087021867. 3
- 71087021868. 4

Question Number : 8 Question Id : 7108705468 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 statements is **incorrect**?

- 1. The highest number of pigs in the world are found in India
- 2. Utter Pradesh provides largest amount of pork
- 3. Assam has the largest number of pork producing pigs
- 4. Pork constitutes about 7.6% of the total meat produced in India

Options :

71087021869. 1
71087021870. 2
71087021871. 3
71087021872. 4

Question Number : 9 Question Id : 7108705469 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 type of N-fertilizer is suitable for water-logged soils?

1. Zinc Phosphate
2. Ammonium Sulphate
3. Calcium
4. Potassium Nitrate

Options :

71087021873. 1
71087021874. 2
71087021875. 3
71087021876. 4

Question Number : 10 Question Id : 7108705470 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 famous Bailadila range of hills in the Bastar district of Chhattisgarh is famous for its

1. Bauxite deposits
2. Manganese deposits
3. Copper deposits
4. High-grade haematite deposits

Options :

71087021877. 1

71087021878. 2

71087021879. 3

71087021880. 4

Question Number : 11 Question Id : 7108705471 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 farmer wishes to start a 100 sq. m rectangular vegetable garden. Since he has only 30m barbed wire, he fences three sides of the garden letting his house compound wall act as the fourth side fencing. What is the dimension of the garden?

1. 15 m x 6.67m
2. 20 m x 5 m
3. 30 m x 3.33 m
4. 40 m x 2.5 m

Options :

71087021881. 1

71087021882. 2

71087021883. 3

71087021884. 4

Question Number : 12 Question Id : 7108705472 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 one of the following industries, the consumption of natural rubber is the largest?

1. Auto tyres and tubes
2. Footwear
3. Dipped goods
4. Latex foam

Options :

71087021885. 1

71087021886. 2

71087021887. 3

71087021888. 4

Question Number : 13 Question Id : 7108705473 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 countries was the partner country of 34th Surajkund International Crafts Fair held in Haryana?

1. China
2. Nepal
3. Bhutan
4. Uzbekistan

Options :

71087021889. 1

71087021890. 2

71087021891. 3

71087021892. 4

Question Number : 14 Question Id : 7108705474 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

Nobel laureate Abhijit Vinayak Banerjee was conferred the honorary Doctor of Letters (D. Litt.) by which University?

1. University of Delhi
2. University of Kolkata
3. University of Mumbai
4. University of Hyderabad

Options :

- 71087021893. 1
- 71087021894. 2
- 71087021895. 3
- 71087021896. 4

Question Number : 15 Question Id : 7108705475 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

Where is the headquarters of European Union?

- 1. Geneva, Switzerland
- 2. Washington D.C., USA
- 3. New York, US
- 4. Brussels, Belgium

Options :

- 71087021897. 1
- 71087021898. 2
- 71087021899. 3
- 71087021900. 4

Question Number : 16 Question Id : 7108705476 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 would be deficient if one finds high somatic cell count in the cow's milk?

- 1. Butterfat
- 2. Whey protein
- 3. Casein
- 4. Trace minerals

Options :

- 71087021901. 1
- 71087021902. 2
- 71087021903. 3
- 71087021904. 4

Question Number : 17 Question Id : 7108705477 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

Who was the first administrator-statesman to attempt planning as a means for economic development?

- 1. C. Rajagopalachari
- 2. V. T. Krishnamachari
- 3. M. Viswesvarayya
- 4. Sir C. P. Ramaswami Aiyar

Options :

- 71087021905. 1
- 71087021906. 2
- 71087021907. 3
- 71087021908. 4

Question Number : 18 Question Id : 7108705478 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

Amazon rainforest span over nine countries. In August 2019, in which country did a deadly fire broke out in the Amazon forest?

- 1. Brazil
- 2. Venezuela
- 3. Colombia
- 4. Argentina

Options :

- 71087021909. 1
- 71087021910. 2
- 71087021911. 3
- 71087021912. 4

Question Number : 19 Question Id : 7108705479 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

Economic liberalization in India started with

- 1. Sustainable changes in industrial licensing policy
- 2. The convertibility of the Indian Rupee
- 3. Significant reduction of tax rates
- 4. Changes in procedural formalities for FDI

Options :

- 71087021913. 1
- 71087021914. 2
- 71087021915. 3
- 71087021916. 4

Question Number : 20 Question Id : 7108705480 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 term 'Delimitation' which was in news recently is associated with which process?

- 1. Fixing the limit of Income tax
- 2. Fixing limits of Affordable housing
- 3. Fixing limits of Territorial constituencies
- 4. Fixing limits of Chairpersons salary

Options :

- 71087021917. 1

71087021918. 2
71087021919. 3
71087021920. 4

Part B Core : Agricultural Engineering and Technology

| | |
|---------------------------------------|-----------|
| Section Id : | 710870137 |
| Section Number : | 2 |
| Section type : | Online |
| Mandatory or Optional : | Mandatory |
| Number of Questions : | 50 |
| Number of Questions to be attempted : | 50 |
| Section Marks : | 200 |
| Display Number Panel : | Yes |
| Group All Questions : | Yes |
| Mark As Answered Required? : | Yes |
| Sub-Section Number : | 1 |
| Sub-Section Id : | 710870137 |
| Question Shuffling Allowed : | Yes |

Question Number : 21 Question Id : 7108705481 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

Major constituents of gunmetal are

1. Copper and Tin
2. Copper and Phosphorous
3. Phosphorous and Manganese
4. Copper and Cobalt

Options :

71087021921. 1
71087021922. 2

71087021923. 3

71087021924. 4

Question Number : 22 Question Id : 7108705482 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 bevel angle of an agricultural disc is measured using a

1. Micrometer
2. Compass
3. Vernier Caliper
4. Combination set

Options :

71087021925. 1

71087021926. 2

71087021927. 3

71087021928. 4

Question Number : 23 Question Id : 7108705483 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 biogas requirement per person per day for cooking is about

1. 50 l
2. 100 l
3. 225 l
4. 500 l

Options :

71087021929. 1

71087021930. 2

71087021931. 3

71087021932. 4

Question Number : 24 Question Id : 7108705484 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 dimension of angular acceleration is

1. LT^{-2}
2. T^{-2}
3. LT^{-1}
4. L^2T^{-2}

Options :

71087021933. 1
71087021934. 2
71087021935. 3
71087021936. 4

Question Number : 25 Question Id : 7108705485 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 direct-acting pressure relief valve is used in the circuit operating at

1. High Volume Flow Rate
2. Low Pressure
3. High Pressure and High Volume
4. Low Volume Low Flow Rate

Options :

71087021937. 1
71087021938. 2
71087021939. 3
71087021940. 4

Question Number : 26 Question Id : 7108705486 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 commonly used seed metering system on a maize planter is

1. Fluted roller
2. Internal double run
3. Inclined plate with cells
4. Cup feed mechanism

Options :

71087021941. 1

71087021942. 2

71087021943. 3

71087021944. 4

Question Number : 27 Question Id : 7108705487 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 an agricultural operation, UAV is most suitable for

1. Seeding
2. Mechanical weeding
3. Spaying
4. Land Levelling

Options :

71087021945. 1

71087021946. 2

71087021947. 3

71087021948. 4

Question Number : 28 Question Id : 7108705488 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

Feed capacity of a 3 bottom 35cm mould board plough operating at a speed of 3km per hour with a field efficiency of 70% is

1. 1.05 ha/hr
2. 0.22 ha/hr
3. 0.10 ha/hr
4. 0.70 ha/hr

Options :

71087021949. 1
71087021950. 2
71087021951. 3
71087021952. 4

Question Number : 29 Question Id : 7108705489 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

Disc angle in a standard disc plough is

1. 12-15 degrees
2. 15-22 degrees
3. 32-40 degrees
4. 42-45 degrees

Options :

71087021953. 1
71087021954. 2
71087021955. 3
71087021956. 4

Question Number : 30 Question Id : 7108705490 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

Safe noise level (dB) for an agricultural worker is

1. 80
2. 100
3. 120
4. 140

Options :

71087021957. 1

71087021958. 2

71087021959. 3

71087021960. 4

Question Number : 31 Question Id : 7108705491 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 statements is true with respect to sieve analysis of soil samples?

1. $D_{60} < D_{10}$
2. $D_{60} > D_{10}$
3. $D_{60} = D_{10}$
4. None of the above

Options :

71087021961. 1

71087021962. 2

71087021963. 3

71087021964. 4

Question Number : 32 Question Id : 7108705492 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

On a specific energy diagram, two depths of flow for a particular specific energy are known as

1. Normal depth
2. Critical depth
3. Alternate depths
4. Variable depths

Options :

71087021965. 1

71087021966. 2

71087021967. 3

71087021968. 4

Question Number : 33 Question Id : 7108705493 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 rectangular channel, 'd' is the depth and 'B' is the base width. The channel section will be the most hydraulically efficient when

1. $B = 4d$
2. $B = 2d$
3. $B = d$
4. $2B = d$

Options :

71087021969. 1

71087021970. 2

71087021971. 3

71087021972. 4

Question Number : 34 Question Id : 7108705494 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 formulae is used to estimate the peak rate of runoff from an area?

1. William's formula
2. Manning's formula
3. Chézy's formula
4. Rational formula

Options :

71087021973. 1

71087021974. 2

71087021975. 3

71087021976. 4

Question Number : 35 Question Id : 7108705495 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 could be measured with lysimeters?

1. Interception losses
2. Flow velocity in a stream
3. Flow rate in pipes
4. Evapotranspiration

Options :

71087021977. 1

71087021978. 2

71087021979. 3

71087021980. 4

Question Number : 36 Question Id : 7108705496 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 time of concentration in an area is determined by using the relationship proposed by

1. Wischmeier and Smith
2. Blaney and Criddle
3. Darcy and Weisbach
4. Kirpitch

Options :

71087021981. 1

71087021982. 2

71087021983. 3

71087021984. 4

Question Number : 37 Question Id : 7108705497 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

Contour bunds are recommended for areas where

1. Rainfall is low and soil is light
2. Rainfall is high and soil is light
3. Rainfall is light and soil is heavy
4. None of the above

Options :

71087021985. 1

71087021986. 2

71087021987. 3

71087021988. 4

Question Number : 38 Question Id : 7108705498 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

Soil taxonomy deals with which one of the following?

1. Principles of Soil Classification
2. Principles of Agricultural Taxation
3. Principles of Soil degradation
4. Principles of Soil Conservation

Options :

71087021989. 1

71087021990. 2

71087021991. 3

71087021992. 4

Question Number : 39 Question Id : 7108705499 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 type of storage in dams?

1. Regular storage
2. Temporary storage
3. Dead storage
4. Live storage

Options :

71087021993. 1

71087021994. 2

71087021995. 3

71087021996. 4

Question Number : 40 Question Id : 7108705500 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 the most efficient method of irrigation?

1. Drip irrigation
2. Furrow irrigation
3. Check basin irrigation
4. Sprinkler Irrigation

Options :

71087021997. 1

71087021998. 2

71087021999. 3

71087022000. 4

Question Number : 41 Question Id : 7108705501 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 sphericity of a grain having length, breadth, thickness (8mm, 4mm, 2mm respectively) is

1. 0.4
2. 0.5
3. 0.6
4. 0.7

Options :

71087022001. 1

71087022002. 2

71087022003. 3

71087022004. 4

Question Number : 42 Question Id : 7108705502 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 important factor which affects the shelf-life of food products is

1. Moisture content
2. Water activity
3. Fat content
4. Protein content

Options :

- 71087022005. 1
- 71087022006. 2
- 71087022007. 3
- 71087022008. 4

Question Number : 43 Question Id : 7108705503 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 quantities of pineapple juice (having 15% sugar content) and sugar syrup (having 40% sugar content) are needed to produce 50 kg of fruit squash containing 20% sugar?

1. 40 kg pineapple juice and 10 kg sugar syrup
2. 30 kg pineapple juice and 20 kg sugar syrup
3. 25 kg pineapple juice and 25 kg sugar syrup
4. 20 kg pineapple juice and 30 kg sugar syrup

Options :

- 71087022009. 1
- 71087022010. 2
- 71087022011. 3
- 71087022012. 4

Question Number : 44 Question Id : 7108705504 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 separators are used for separation of materials based on their relative length?

1. Disk separator and Indented cylinder separator
2. Spiral and Disk separator
3. Disk and Cyclone separator
4. Spiral and Specific gravity separator

Options :

71087022013. 1

71087022014. 2

71087022015. 3

71087022016. 4

Question Number : 45 Question Id : 7108705505 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 stainless steel 316 (18/10), the 18/10 represents

1. 18% Ni and 10% Cr
2. 18% Cr and 10% Cu
3. 18% Cu and 10% Al
4. 18% Cr and 10% Ni

Options :

71087022017. 1

71087022018. 2

71087022019. 3

71087022020. 4

Question Number : 46 Question Id : 7108705506 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

Index organism for commercial processing of canned products is

1. *Campylobacter jejuni*
2. *Clostridium perfringens*
3. *Clostridium botulinum*
4. *Staphylococcus aureus*

Options :

71087022021. 1

71087022022. 2

71087022023. 3

71087022024. 4

Question Number : 47 Question Id : 7108705507 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 cold regions, where could the deposition of water occur in metal storage containers?

1. Bottom
2. Top
3. Centre
4. Throughout the container

Options :

71087022025. 1

71087022026. 2

71087022027. 3

71087022028. 4

Question Number : 48 Question Id : 7108705508 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 the most important objective of process control?

1. To reduce variability in final product
2. To utilize resources effectively
3. To maximize production
4. To reduce contamination

Options :

71087022029. 1

71087022030. 2

71087022031. 3

71087022032. 4

Question Number : 49 Question Id : 7108705509 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

Inverse transducer converts

1. Solar energy to any form of energy
2. Electrical to any form of energy
3. Mechanical energy to electrical energy
4. Mechanical energy to light

Options :

71087022033. 1

71087022034. 2

71087022035. 3

71087022036. 4

Question Number : 50 Question Id : 7108705510 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 India, which of the following sets the permissible limits of additives in fruit beverages?

A. FSSAI

B. Fruit Products Order

C. BIS

Select the most appropriate answer from the options given below?

1. A and B

2. B only

3. A only

4. C only

Options :

71087022037. 1

71087022038. 2

71087022039. 3

71087022040. 4

Question Number : 51 Question Id : 7108705511 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: Biogas can be utilized effectively for cooking, lighting, operating engines and power generation applications.

Statement II: Bio digestion process can be done only on wet fermentation.

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

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

Options :

71087022041. 1

71087022042. 2

71087022043. 3

71087022044. 4

Question Number : 52 Question Id : 7108705512 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: Fluidized bed gasification system can handle a wide range of high moisture feedstocks.

Statement II: Fluidization is the key concept to high throughput and low turndown ratio (TDR).

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

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

Options :

71087022045. 1

71087022046. 2

71087022047. 3

71087022048. 4

Question Number : 53 Question Id : 7108705513 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: Temperature of carbonization plays an important role in deciding the quality of charcoal.

Statement II: The calorific value of producer gas can be affected by the chemical composition of the feedstock, air velocity, thickness of bed and particle size of the feed.

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

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

Options :

71087022049. 1

71087022050. 2

71087022051. 3

71087022052. 4

Question Number : 54 Question Id : 7108705514 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 in sequence the steps involved in designing a solar PV powered water pumping system.

- A. Determine the size and number of PV modules required.
- B. Determine the solar radiation available at the given location.
- C. Determine the total dynamic head.
- D. Determine the amount of water required per day.
- E. Determine the hydraulic energy required per day to pump the required amount of water.

Choose the correct answer from the options given below:

- 1. A, B, C, D & E
- 2. B, C, D, E & A
- 3. C, E, A, B & D
- 4. D, C, E, B & A

Options :

- 71087022053. 1
- 71087022054. 2
- 71087022055. 3
- 71087022056. 4

Question Number : 55 Question Id : 7108705515 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. Efficiency of flat plate collector | I. 6-10% |
| B. Optical efficiency of concentrating collector | II. 15-25% |
| C. Collection efficiency of solar pond | III. 40% |
| D. Efficiency of CdTe Solar cell | IV. 65% |

Choose the correct answer from the options given below:

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

Options :

71087022057. 1
71087022058. 2
71087022059. 3
71087022060. 4

Question Number : 56 Question Id : 7108705516 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 maximum theoretical power co-efficient in a wind rotor is

1. 0.593
2. 0.953
3. 27/16
4. 0.35

Options :

71087022061. 1
71087022062. 2
71087022063. 3

71087022064. 4

Question Number : 57 Question Id : 7108705517 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: one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A: Enzymes are usually protein substances which act as biocatalysts.

Reason R: Enzymes lower the activation energy of the reaction.

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

1. Both **A** and **R** are true and **R** is the correct explanation of **A**.
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**.
3. **A** is true but **R** is false.
4. **A** is false but **R** is true.

Options :

71087022065. 1

71087022066. 2

71087022067. 3

71087022068. 4

Question Number : 58 Question Id : 7108705518 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 primary batteries, the chemical reactions are non-reversible.

Statement II: For vehicle propulsion, lead-acid batteries are preferred due to their higher specific energy.

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

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

Options :

71087022069. 1

71087022070. 2

71087022071. 3

71087022072. 4

Question Number : 59 Question Id : 7108705519 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. Stroboscope | I. Flue gas analysis |
| B. Psychrometer | II. Light |
| C. Fyrite | III. R.P.M. |
| D. Luxmeter | IV. Humidity |

Choose the correct answer from the options given below:

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

Options :

71087022073. 1

71087022074. 2

71087022075. 3

71087022076. 4

Question Number : 60 Question Id : 7108705520 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 steps involved in the Critical Path Method in sequence

- A. Determine the sequence of activities
- B. Specify the individual activities
- C. Estimate activity completion time
- D. Draw the network diagram
- E. Identify the critical path

Choose the correct answer from the options given below:

- 1. A, B, D, E, C
- 2. B, A, D, C, E
- 3. C, B, A, E, D
- 4. D, B, A, C, E

Options :

- 71087022077. 1
- 71087022078. 2
- 71087022079. 3
- 71087022080. 4

Question Number : 61 Question Id : 7108705521 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

Tensiometers installed are used for measuring

- 1. Wilting point
- 2. Capillary potential
- 3. Osmatic potential
- 4. Diffusivity

Options :

- 71087022081. 1
- 71087022082. 2
- 71087022083. 3
- 71087022084. 4

Question Number : 62 Question Id : 7108705522 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 crops in increasing order of effective root zone depth

- A. Sugarcane
- B. Rice
- C. Maize
- D. Wheat

Choose the correct answer from the options given below:

- 1. A, B, C, D
- 2. B, A, C, D
- 3. B, D, C, A
- 4. D, C, B, A

Options :

- 71087022085. 1
- 71087022086. 2
- 71087022087. 3
- 71087022088. 4

Question Number : 63 Question Id : 7108705523 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 open channel flow, if the depth of flow is the same at every section of the channel, then the flow is known as

1. Unsteady flow
2. Uniform flow
3. Varied flow
4. Gradually varied flow

Options :

71087022089. 1
71087022090. 2
71087022091. 3
71087022092. 4

Question Number : 64 Question Id : 7108705524 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: one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A: After 1978, irrigation projects in India are classified on the basis of culturable command area

Reason R: Major Irrigation projects have a culturable command area greater than 5000 ha.

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

1. Both **A** and **R** are true and **R** is the correct explanation of **A**.
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**.
3. **A** is true but **R** is false.
4. **A** is false but **R** is true.

Options :

71087022093. 1
71087022094. 2

71087022095. 3

71087022096. 4

Question Number : 65 Question Id : 7108705525 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 value of transmissibility (litres per day per meter) for an irrigation well must be equal to or greater than

1. 200
2. 20
3. 2000
4. 20,000

Options :

71087022097. 1

71087022098. 2

71087022099. 3

71087022100. 4

Question Number : 66 Question Id : 7108705526 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 flow in a border strip is a case of spatially varied

1. steady open channel flow with decreasing discharge.
2. unsteady open channel flow with decreasing discharge.
3. steady open channel flow with increasing discharge.
4. unsteady open channel flow with increasing discharge.

Options :

71087022101. 1

71087022102. 2

71087022103. 3

71087022104. 4

Question Number : 67 Question Id : 7108705527 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 common cladding/covering material used for a poly house is:

1. 100 micron PVC film.
2. 200 micron UV stabilized polyfilm.
3. 200 micron HDPE film.
4. 100 micron HDPE film.

Options :

- 71087022105. 1
- 71087022106. 2
- 71087022107. 3
- 71087022108. 4

Question Number : 68 Question Id : 7108705528 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

Secondary salinization occurs in:

1. Irrigated Command in Arid region only.
2. Irrigated Command in Semi-Arid Region only.
3. Both Irrigated command in Arid and Semi-arid Regions.
4. Irrigated Command in Humid region only.

Options :

- 71087022109. 1
- 71087022110. 2
- 71087022111. 3
- 71087022112. 4

Question Number : 69 Question Id : 7108705529 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. Mass curve | I. Always a falling curve |
| B. Thiessen method | II. Relationship between accumulated rainfall and time |
| C. DAD curve | III. Average rainfall depth over an area |
| D. Hyetograph | IV. Graph between rainfall intensity and time |

Choose the correct answer from the options below:

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

Options :

71087022113. 1

71087022114. 2

71087022115. 3

71087022116. 4

Question Number : 70 Question Id : 7108705530 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

Triangular Irrigation Network (TIN) is a

1. Roster data
2. Vector data
3. Transportation data
4. None of the above

Options :

71087022117. 1

71087022118. 2

71087022119. 3

71087022120. 4

Part C : Irrigation Water Management Engineering or Irrigation and Drainage Engineering

| | |
|--|-----------|
| Section Id : | 710870138 |
| Section Number : | 3 |
| Section type : | Online |
| Mandatory or Optional : | Mandatory |
| Number of Questions : | 50 |
| Number of Questions to be attempted : | 50 |
| Section Marks : | 200 |
| Display Number Panel : | Yes |
| Group All Questions : | Yes |
| Mark As Answered Required? : | Yes |
| Sub-Section Number : | 1 |
| Sub-Section Id : | 710870138 |
| Question Shuffling Allowed : | Yes |

Question Number : 71 Question Id : 7108705531 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

Richard's equation is valid for

1. Saturated flow conditions
2. Unsaturated flow conditions
3. Both saturated and unsaturated conditions
4. Not valued for any of the above flow conditions

Options :

71087022121. 1

71087022122. 2

71087022123. 3

71087022124. 4

Question Number : 72 Question Id : 7108705532 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 Leaf Water Potential in bars for a soil-plant-atmospheric system varies from

1. - 0.1 to - 5
2. - 50 to 100
3. - 5 to - 50
4. - 1000 to - 2000

Options :

71087022125. 1

71087022126. 2

71087022127. 3

71087022128. 4

Question Number : 73 Question Id : 7108705533 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. Vertisols | I. Lack of profile development |
| B. Entisols | II. Deep red soils |
| C. Oxisols | III. Soil with clay enriched horizon |
| D. Alfisols | IV. Shrinking and swelling soils |

Choose the correct answer from the options given below:

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

Options :

71087022129. 1

71087022130. 2

71087022131. 3

71087022132. 4

Question Number : 74 Question Id : 7108705534 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 crops in descending order of Irrigation water requirement

A. Gram

B. Maize

C. Paddy

D. Peas

E. Wheat

Choose the correct answer from the options given below

1. C, A, B, D, E

2. C, E, A, D, B

3. C, B, D, A, E

4. C, D, E, A, B

Options :

71087022133. 1

71087022134. 2

71087022135. 3

71087022136. 4

Question Number : 75 Question Id : 7108705535 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 out of the following crops has the least Maximum Allowable Depletion (MAD) of soil moisture?

1. Sugarcane
2. Wheat
3. Sunflower
4. Potato

Options :

71087022137. 1
71087022138. 2
71087022139. 3
71087022140. 4

Question Number : 76 Question Id : 7108705536 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 instruments uses dielectric constant of water for measurement of soil-moisture?

1. Neutron Moisture meter
2. TDR moisture sensor
3. Electrical Resistance block
4. Tensiometers

Options :

71087022141. 1
71087022142. 2
71087022143. 3
71087022144. 4

Question Number : 77 Question Id : 7108705537 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 a multistage pump, the specific speed is evaluated on the basis of

- A. Head per stage
- B. Capacity per stage
- C. Total head

Select the most appropriate option from the following:

- 1. A only
- 2. B only
- 3. C only
- 4. A and B both

Options :

- 71087022145. 1
- 71087022146. 2
- 71087022147. 3
- 71087022148. 4

Question Number : 78 Question Id : 7108705538 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 open channel flow, the hydraulic radius is the ratio of

- 1. the depth of flow to square of wetted parameter
- 2. the cross-sectional area to wetted perimeter
- 3. the depth of flow to its wetted perimeter
- 4. the velocity of flow to depth of flow

Options :

- 71087022149. 1
- 71087022150. 2

71087022151. 3

71087022152. 4

Question Number : 79 Question Id : 7108705539 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 conical pipe has diameters of 10 cm and 15 cm, at the two ends. Its velocity at 10 cm end is 2 m/sec. What is the velocity at the other end?

1. 0.89 m/sec

2. 3.5 m/sec

3. 1.33 m/sec

4. 0.5 m/sec

Options :

71087022153. 1

71087022154. 2

71087022155. 3

71087022156. 4

Question Number : 80 Question Id : 7108705540 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: Reynold's number represents the ratio of inertia force to gravity force and governs the problems which involve the motion of liquid in contact with the atmosphere.

Statement II: Weber's number represents the inertia force to surface tension force.

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

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

Options :

71087022157. 1

71087022158. 2

71087022159. 3

71087022160. 4

Question Number : 81 Question Id : 7108705541 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. Newton's Equation | I. $hf = f \frac{L}{D} \frac{V^2}{2g}$ |
| B. Manning's Equation | II. $(\frac{b_1}{\omega} + \frac{v_1^2}{2g} + Z_1) = (\frac{b_2}{\omega} + \frac{v_2^2}{2g} + Z_2)$ |
| C. Darcy Weisbach Equation | III. $J = \mu \frac{dv}{dy}$ |
| D. Bernoulli's Equation | IV. $V = \frac{1}{n} R^{2/3} S^{1/2}$ |

Choose the correct answer from the options given below:

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

Options :

71087022161. 1
71087022162. 2
71087022163. 3
71087022164. 4

Question Number : 82 Question Id : 7108705542 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

Manning's roughness co-efficient is directly proportional to

1. Relative roughness
2. Particle size
3. Flow velocity
4. Surface slope

Options :

71087022165. 1

71087022166. 2

71087022167. 3

71087022168. 4

Question Number : 83 Question Id : 7108705543 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 the inflow is at critical depth, the Froude number is

1. 0.5

2. 100

3. 1

4. 2000

Options :

71087022169. 1

71087022170. 2

71087022171. 3

71087022172. 4

Question Number : 84 Question Id : 7108705544 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 discharge from a rectangular weir with no end contraction of 45 cm long with a head of 12 cm?

1. 32.4 lps

2. 32.6 lps

3. 34.4 lps

4. 33.5 lps

Options :

71087022173. 1

71087022174. 2

71087022175. 3

71087022176. 4

Question Number : 85 Question Id : 7108705545 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. Pump selection | I. Airlift pump |
| B. Reflux valve | II. Centrifugal pump |
| C. Volute casing | III. Matching pump characteristics |
| D. Working submergence | IV. Reverse flow in a pipeline |

Choose the correct answer from the options given below

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

Options :

71087022177. 1

71087022178. 2

71087022179. 3

71087022180. 4

Question Number : 86 Question Id : 7108705546 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 a canal system, loss of water from the Main and the Branch canal is 30-40%

Statement II: In a canal system, loss of water from the major and minor distributaries is less than 5%

In light of the above choose the **most appropriate** answer from options given below

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

Options :

71087022181. 1

71087022182. 2

71087022183. 3

71087022184. 4

Question Number : 87 Question Id : 7108705547 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: Theis obtained the solution for unsteady flow in an unconfined aquifer

Statement II: Well function is used in Theis's solution

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

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

Options :

71087022185. 1

71087022186. 2

71087022187. 3

71087022188. 4

Question Number : 88 Question Id : 7108705548 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 soil texture types in descending order of their saturated hydraulic conductivity

- A. Silt Loam
- B. Clay Loam
- C. Sandy Loam
- D. Loamy Sand
- E. Clay

Choose the correct answer from options given below

- 1. E, C, A, B, D
- 2. A, B, D, C, E
- 3. C, A, B, E, D
- 4. D, C, A, B, E

Options :

- 71087022189. 1
- 71087022190. 2
- 71087022191. 3
- 71087022192. 4

Question Number : 89 Question Id : 7108705549 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 type of pollutants are removed during the movement of water through the soil profile?

1. Biological
2. Chemical
3. Suspended particles
4. Water solubles

Options :

71087022193. 1

71087022194. 2

71087022195. 3

71087022196. 4

Question Number : 90 Question Id : 7108705550 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 dam discharge rate, which of the following aquifers will have a maximum radius of influence?

1. Leaky Aquifer
2. Confined Aquifer
3. Unconfined Aquifer
4. Perched Aquifer

Options :

71087022197. 1

71087022198. 2

71087022199. 3

71087022200. 4

Question Number : 91 Question Id : 7108705551 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 steps involved in arriving at a unit hydrograph in sequence

- A. Baseflow separation
- B. Divide surface runoff by depth of runoff
- C. Estimation of surface runoff volume
- D. Estimation of surface runoff in terms of depth

Choose the **correct** answer from the option given below

- 1. A, B, C, D
- 2. D, B, C, A
- 3. A, C, D, B
- 4. C, A, D, B

Options :

- 71087022201. 1
- 71087022202. 2
- 71087022203. 3
- 71087022204. 4

Question Number : 92 Question Id : 7108705552 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: one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A: Disc filters are used for the flow rate of 4-30 m³/hr. In this range, they can replace secondary screen filters.

Reason R: Disc filters can also be used for the removal of a low level of fine sand, dust and other inorganic impurities present in irrigation water, along with a low level of organic impurities.

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

1. Both **A** and **R** are true and **R** is the correct explanation of **A**.
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**.
3. **A** is true but **R** is false.
4. **A** is false but **R** is true.

Options :

- 71087022205. 1
- 71087022206. 2
- 71087022207. 3
- 71087022208. 4

Question Number : 93 Question Id : 7108705553 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

Ventury injector and fertilizer injection pumps are:

1. Active and Passive fertigation systems respectively
2. Passive and Active fertigation systems respectively
3. Active fertigation systems
4. Passive fertigation systems

Options :

- 71087022209. 1

71087022210. 2

71087022211. 3

71087022212. 4

Question Number : 94 Question Id : 7108705554 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 papaya crop has a 2m x 2m spacing and 50% wetted area. Pan evaporation of the region is 6mm/day. The crop factor and pan coefficient are 0.7 and 0.7, respectively. Then the crop water requirement of the papaya will be:

1. 588 L/day/plant
2. 0.588 L/day/plant
3. 58.8 L/day/plant
4. 5.88 L/day/plant

Options :

71087022213. 1

71087022214. 2

71087022215. 3

71087022216. 4

Question Number : 95 Question Id : 7108705555 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 are two statements:

Statement I: Contour furrows carry water across a sloping field rather than down the slope.

Statement II: The furrows are given a steep slope along its length as in the case of graded borders.

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 Statements 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 :

71087022217. 1

71087022218. 2

71087022219. 3

71087022220. 4

Question Number : 96 Question Id : 7108705556 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 soils in increasing order as per the optimum length of borders

- A. Sandy soils
- B. Medium loam soils
- C. Clay loam soils
- D. Clay soils
- E. Sandy loam soils

Choose the correct answer from the options given below

- 1. A, E, B, C, D
- 2. E, A, C, B, D
- 3. B, A, C, E, D
- 4. B, E, A, C, D

Options :

- 71087022221. 1
- 71087022222. 2
- 71087022223. 3
- 71087022224. 4

Question Number : 97 Question Id : 7108705557 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 time of ponding at any point along the furrows is the:

- 1. Horizontal distance between the advance and recession curves
- 2. Vertical distance between the advance and recession curves
- 3. Vertical distance between the X-axis and recession curve
- 4. Horizontal distance between the X-axis and advance curve

Options :

71087022225. 1
71087022226. 2
71087022227. 3
71087022228. 4

Question Number : 98 Question Id : 7108705558 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 sub-unit under a micro-irrigation system is termed as:

1. Area irrigated by a main line
2. Area irrigated by a sub-main line
3. Total area irrigated by a micro irrigation system
4. Total area irrigated by the drip system

Options :

71087022229. 1
71087022230. 2
71087022231. 3
71087022232. 4

Question Number : 99 Question Id : 7108705559 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 correct about the orientation of multi-span polyhouse in Northern Hemisphere?

1. The gutters of the polyhouse should be North-South oriented
2. The gutters of the polyhouse should be East-West oriented
3. The length of the polyhouse should be North-West oriented
4. The gutters of the polyhouse should be North-East oriented

Options :

71087022233. 1

71087022234. 2

71087022235. 3

71087022236. 4

Question Number : 100 Question Id : 7108705560 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 are two statements:

Statement I: Under a real-time feedback system of automation, the application of irrigation water is based on the actual dynamic demand of the plant itself.

Statement II: The plant root zone effectively reflects all environmental factors acting upon the plants.

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 :

71087022237. 1

71087022238. 2

71087022239. 3

71087022240. 4

Question Number : 101 Question Id : 7108705561 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 appropriate poly film required for the construction of a polyhouse for the cultivation of cut roses is:

1. 200 micron transparent UV stabilized
2. 200 micron sulfur treated UV stabilized
3. 200 micron diffused non-sulfur treated UV stabilized
4. 100 micron diffused non-sulfur treated UV stabilized

Options :

71087022241. 1

71087022242. 2

71087022243. 3

71087022244. 4

Question Number : 102 Question Id : 7108705562 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

To avoid the shading effect, as a general rule, no object taller than 3.3 m should be within 'X' meters of the greenhouse in either east, west or south direction. What is the value of 'X'?

1. 13.3 m
2. 16.6 m
3. 9.0 m
4. 20.0 m

Options :

71087022245. 1

71087022246. 2

71087022247. 3

71087022248. 4

Question Number : 103 Question Id : 7108705563 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 residual sodium carbonate (RSC value) of irrigation water is < 1.25 , then what can you say about the water for irrigation? It is

1. Not suitable
2. Marginally suitable
3. Probably safe
4. Most suitable

Options :

71087022249. 1

71087022250. 2

71087022251. 3

71087022252. 4

Question Number : 104 Question Id : 7108705564 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: one is labelled as **Assertion A** and other is labelled as **Reason R**.

Assertion A: The envelope placed around a pipe drain reduces the entrance resistance and decreases the siltation in the pipeline (drain).

Reason R: The envelope placed around the drainpipe decreases the hydraulic radius of the drain pipe.

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

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

Options :

71087022253. 1

71087022254. 2

71087022255. 3

71087022256. 4

Question Number : 105 Question Id : 7108705565 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 dimension of intrinsic permeability is

1. ML^2T^0
2. M^0LT^{-1}
3. M^0LT^{-2}
4. M^0LT^2

Options :

71087022257. 1
71087022258. 2
71087022259. 3
71087022260. 4

Question Number : 106 Question Id : 7108705566 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 are two statements:

Statement I: The seepage line in an earth embankment is also called a phreatic line.

Statement II: Seepage line is similar to a parabola

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 :

71087022261. 1
71087022262. 2
71087022263. 3

71087022264. 4

Question Number : 107 Question Id : 7108705567 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

Drainable pore space is also termed as:

- A. Specific yield
- B. Drainable porosity
- C. Effective porosity
- D. Intrinsic porosity
- E. Total porosity

Choose the **correct** answer from the options given below:

- 1. A, D, E
- 2. B, C, D
- 3. C, D, E
- 4. A, B, C

Options :

- 71087022265. 1
- 71087022266. 2
- 71087022267. 3
- 71087022268. 4

Question Number : 108 Question Id : 7108705568 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

Drainage equation used to describe a fluctuating water table is:

1. Glover-Dumm
2. De Zeeuw-Hellinga
3. Ernst
4. Hooghoudt

Options :

71087022269. 1
71087022270. 2
71087022271. 3
71087022272. 4

Question Number : 109 Question Id : 7108705569 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

Determine the depth of irrigation water which would change 30 cm depth of loam soil into a saline condition, if

- EC of irrigation water is 1 millimhos/cm
- The bulk density of the soil is 1.2 g/cc
- The density of water is 1 g/cc, and
- The saturation percentage of the soil is 40.

1. 57.6 cm
2. 5.76 cm
3. 14.6 cm
4. 1.46 cm

Options :

71087022273. 1
71087022274. 2
71087022275. 3
71087022276. 4

Question Number : 110 Question Id : 7108705570 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

Rock catchment area for water harvesting varies from

1. 0.5 ha to 2 ha
2. 2 ha to 5 ha
3. 10 km² to 20 km²
4. 100 km² to few hundred km²

Options :

71087022277. 1
71087022278. 2
71087022279. 3
71087022280. 4

Question Number : 111 Question Id : 7108705571 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

Percolation tanks are designed for ponded water column generally between

1. 1-3 m
2. 1-2 m
3. 3-4.5 m
4. 4.5-6 m

Options :

71087022281. 1
71087022282. 2
71087022283. 3
71087022284. 4

Question Number : 112 Question Id : 7108705572 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 Dilution method of stream gauging is suitable for

1. Large alluvial river
2. Flood flow in a river
3. Steady flow in small streams
4. River with Industrial pollution

Options :

71087022285. 1

71087022286. 2

71087022287. 3

71087022288. 4

Question Number : 113 Question Id : 7108705573 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 construction of dugout farm pond, the permissible limit of seepage loss is

1. 500 cm depth per year
2. 100 cm depth per year
3. 1000 cm depth per year
4. 10 cm depth per year

Options :

71087022289. 1

71087022290. 2

71087022291. 3

71087022292. 4

Question Number : 114 Question Id : 7108705574 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 watershed areas in increasing order for values of runoff coefficient

- A. Forest land having slopes less than 5% and sandy loam soil.
- B. Pasture land having 5-10% slopes with sandy loam soil.
- C. Pasture land having 10-30% slopes with stiff clay soil.
- D. Cultivated land having 10-30% slope with sandy loam soil.
- E. Forest land having 5-10% slope with sandy loam soil.

Choose the correct answer from the options given below

- 1. A, B, E, D, C
- 2. A, B, C, D, E
- 3. C, D, A, B, E
- 4. A, C, B, D, E

Options :

- 71087022293. 1
- 71087022294. 2
- 71087022295. 3
- 71087022296. 4

Question Number : 115 Question Id : 7108705575 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 watershed changed from rural area to urban area. Hydrographs after urbanisation would show

- A. Decrease in time to peak
- B. Increase in volume of runoff
- C. Decrease in the volume of runoff
- D. Increase in peak discharge
- E. Decrease in time base

Choose the correct answer from the options given below

- 1. A only
- 2. A, B and D only
- 3. A and B only
- 4. A, B, D and E only

Options :

71087022297. 1

71087022298. 2

71087022299. 3

71087022300. 4

Question Number : 116 Question Id : 7108705576 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: Ephemeral stream is one that has a base flow contribution

Statement II: Sequent peak algorithm is used for the estimation of runoff from rainfall

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 incorrect and Statement II is true
4. Statement I is correct and Statement II is false

Options :

- 71087022301. 1
- 71087022302. 2
- 71087022303. 3
- 71087022304. 4

Question Number : 117 Question Id : 7108705577 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 a sensor can record 4 bits of information in a pixel, the maximum brightness level will be:

1. 10
2. 16
3. 18
4. 20

Options :

- 71087022305. 1
- 71087022306. 2
- 71087022307. 3
- 71087022308. 4

Question Number : 118 Question Id : 7108705578 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 scale of the map is 1:100,000, an object which is 1 cm on the map would actually be

1. One meter long on the ground
2. 100 meter long on the ground
3. One kilometer long on the ground
4. 10 kilometer long on the ground

Options :

71087022309. 1

71087022310. 2

71087022311. 3

71087022312. 4

Question Number : 119 Question Id : 7108705579 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: one is labelled as **Assertion A** and the other is labelled as **Reason R**

Assertion A: The crux of Precision Agriculture is the management of site-specific variability for improving resource and input use efficiency.

Reason R: The management of infield variability in soil fertility and crop condition for improving crop production without taking proper care of environmental impact.

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

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

Options :

71087022313. 1

71087022314. 2

71087022315. 3

71087022316. 4

Question Number : 120 Question Id : 7108705580 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

Yield response to water factor (Ky) represents the ratio of

1. actual yield and actual evapotranspiration
2. maximum yield and maximum evapotranspiration
3. relative yield decrease to the relative evapotranspiration deficit
4. actual yield to the maximum yield

Options :

71087022317. 1

71087022318.2

71087022319.3

71087022320.4