



भारत सरकार :: अंतरिक्ष विभाग
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सतीश धवन अंतरिक्ष केंद्र शार, श्रीहरिकोटा

SATISH DHAWAN SPACE CENTRE SHAR
Sriharikota

भारतीय अंतरिक्ष अनुसंधान संगठन
Indian Space Research Organisation



Section : Industrial Engineering

Q.1 Every linear programming problem (LPP) is associated with another LPP is called__

- A. Primal
- B. Dual
- C. Non-Linear Programming
- D. Alternative

Ans ☒ 1. A

☒ 2. B

☒ 3. C

☒ 4. D

Question ID : 5834932506

Q.2 Human Development Index (HDI) is prepared by

- A. UNDP
- B. WTO
- C. WHO
- D. IMF

Ans ☒ 1. A

☒ 2. B

☒ 3. C

☒ 4. D

Question ID : 5834932523

Q.3 The time required to complete a job is established and a bonus is paid to the worker based on the exact % of time saved. This type of incentive plan is known as

- A. Dry work plan
- B. Halsey premium plan
- C. Taylor plan
- D. Rowan plan

Ans ☒ 1. A

☒ 2. B

☒ 3. C

☒ 4. D

Question ID : 5834932538

Q.4 Among the given options, which search algorithm requires less memory?

- A. Depth First Search
- B. Optimal Search
- C. Breadth First Search
- D. Linear Search

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932503

Q.5 Choose the options that are NOT correct regarding machine learning (ML) and artificial intelligence (AI),

- A. ML is an alternate way of programming intelligent machines.
- B. ML is a set of techniques that turns a dataset into a software.
- C. AI is a software that can emulate the human mind.
- D. ML and AI have very different goals.

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932550

Q.6

SIMO charts are used in

- A. Method study
- B. Micro motion study
- C. Process analysis
- D. Layout analysis

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932537

Q.7 At Break Even point

- A. Total Cost is less than the Sales Revenue
- B. Total Cost is more than Sales Revenue
- C. Total Cost is equal to Sales Revenue
- D. Fixed Cost is equal to Variable Cost

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

Question ID : 5834932529

Q.8 Which one of the following pairs is not correctly matched?

- A. SPT Rule ----fairness to all jobs
- B. FIFO Rule ----fairness to all jobs
- C. Johnsons Rule --two machine sequencing
- D. EDD Rule -----lateness minimization

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

Question ID : 5834932514

Q.9 The most important feature of spiral model is?

- A. Requirement analysis
- B. Configuration management
- C. Quality management
- D. Risk management

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

Question ID : 5834932513

Q.10 Drum- Buffer-Rope (DBR) method is used in which scheduling problem

- A. Job shop
- B. Flow shop
- C. Single machine
- D. Young shop

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

Question ID : 5834932544

Q.11 Which is correct sequence?

- A. Information-data-Knowledge-Wisdom
- B. Wisdom-Information-Knowledge-data
- C. Data-Information-Knowledge-Wisdom
- D. Data-Information-Wisdom-Knowledge

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

Question ID : 5834932525

Q.12 Inherent Availability (AI) is equal to

- A. $MTBF/(MTBF+MTTR)$
- B. $MTTR/(MTBF+MTTR)$
- C. $(MTBF+MTTR)/MTTR$
- D. $MTBF/MTTR$

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

Question ID : 5834932547

Q.13 The goal of motion study is to achieve

- A. Cost minimization
- B. Maximum efficiency
- C. Profitability
- D. All of the above

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

Question ID : 5834932508

Q.14 Standard deviation of two observations 2 and 8 is

- A. 5
- B. 4
- C. 3
- D. 6

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

Question ID : 5834932531

Q.15 Poisson distribution is assumed in

- A. P-Chart
- B. R- Chart
- C. U- Chart
- D. C- Chart

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

Question ID : 5834932540

Q.16 Arrange the following basic steps involved in value analysis in the correct sequence:

1.Create 2.Blast 3.Refine

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

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

Question ID : 5834932512

Q.17 The layout of ship building is

- A. Process Layout
- B. Group Layout
- C. Fixed Position Layout
- D. Product Layout

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

Question ID : 5834932519

Q.18 Match the following :

- | | |
|-----------------|---------------|
| 1. Sort | - a. Seiton |
| 2. Set in order | - b. Seiketsu |
| 3. Shine | - c. Seiri |
| 4. Standardise | - d. Seiso |
- A. 1-d, 2-a, 3-b, 4-c
 - B. 1-c, 2-a, 3-d, 4-b
 - C. 1-b, 2-c, 3-a, 4-d
 - D. 1-a, 2-c, 3-d, 4-b

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

Question ID : 5834932541

Q.19 What refers to Linear Programming that includes an evaluation of relative risks and uncertainties in various alternatives of choice for management decisions?

- A. Deterministic Programming
- B. Probabilistic Programming
- C. Stochastic Programming
- D. Both B and C

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

Question ID : 5834932504

Q.20 The ratio of total operating time to number of failures is called

- A. MTTF
- B. MTBF
- C. MOT
- D. None of these

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932546

Q.21 In case of mutually exclusive projects, which one is the most suitable criterion for evaluation of projects?

- A. Net Present Value
- B. Payback Period
- C. Internal Rate of Return
- D. Rate of Return

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932511

Q.22 Solve the following linear programming problem.

$$\text{Max } Z = 4x_1 + 5x_2$$

Subject to

$$x_1 + 2x_2 \leq 40$$

$$4x_1 + 3x_2 \leq 120$$

and $x_1, x_2 \geq 0$

- A. 116
- B. 126
- C. 136
- D. 146

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932515

Q.23 Matrix Organization structure is essentially a violation of the principle of_____

- A. Unity of command
- B. Scalar Chain
- C. Unity of Direction
- D. Division of Labour

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932535

Q.24 Which is not a scale of measurement?

- A. Nominal Scale
- B. Ordinal Scale
- C. Internal Scale
- D. Ratio Scale

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932533

Q.25 Linear Programming is a technique used for determining:

- A. Production Programme
- B. Plant Layout
- C. Product Mix.
- D. Manufacturing Sequence.

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932505

Q.26 In the EVM method, schedule variance can be calculated as

- A. AC-EV
- B. AC-PV
- C. EV-PV
- D. EV-AC

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

Question ID : 5834932534

Q.27 ----- are simple correlation between the variables and the factors

- A. Factor Score
- B. Factor Loading
- C. Correlation Loading
- D. None of the above

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

Question ID : 5834932532

Q.28 An assembly line data is given below:

Station	1	2	3	4	5	6
Cycle time (s)	90	90	90	90	90	90
Task time (s)	70	70	80	70	80	60
Idle Time (s)	20	20	10	20	10	30

The percentage utilization of labour on the assembly line is

- A. 20.37
- B. 25.58
- C. 26.63
- D. 79.62

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

Question ID : 5834932545

Q.29 The observed time is recorded to be 20 minutes for a job done by a worker whose rating is 90%. The following allowances are recommended by the management.

1. Personal needs allowance: 4% of basic time
2. Basic Fatigue allowance: 1% of basic time
3. Contingency work allowance: 2% of basic time
4. Contingency delay allowance: 3% of basic time

The work content of the job is

- A. 18 min
- B. 19 min 15.6 sec
- C. 19 min 26.4 sec
- D. 19 min 48 sec

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

Question ID : 5834932539

Q.30 The core job characteristic that allows the worker to perceive the job as whole and recognise a start to finish

- A. Job identity
- B. Skill variety
- C. Job significance
- D. Autonomy

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

Question ID : 5834932524

Q.31 If according to the hypothesis, the result should be positive, but in fact it is negative, then it is known as _____.

- A. False Negative Hypothesis
- B. Specialized Hypothesis
- C. False Positive Hypothesis
- D. Consistent Hypothesis

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

Question ID : 5834932551

Q.32 The layout suitable for low demand and high variety product is

- A. Group Layout
- B. Product Layout
- C. Process Layout
- D. Static Layout

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932521

Q.33 Which of the following is the correct assumption for replacement policy when money value does not change with time?

- A. No Capital cost
- B. No Scrap Value
- C. Zero maintenance cost
- D. Constant Scrap Value

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932509

Q.34 To transfer the key row in simplex table we have to

- A. Add the elements of key row to key number
- B. Subtract the elements of key row from topmost no key row
- C. Divide the elements of key row by key number
- D. None of the above

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932502

Q.35 In supply chain management, ATP stands for

- A. Acquire, Track and Perform
- B. Available To Promise
- C. Active Transport Protocol
- D. Access To Point

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932516

Q.36 Typically, profit is negative in which stage of the product life cycle

- A. Growth
- B. Maturity
- C. Introduction
- D. Decline

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932548

Q.37 The time required for four assembly operations A, B, C and D is 5, 8, 10 and 7 hours respectively. While assembly preparation time required is 7, 4, 3 and 6 hours respectively, the sequence time that minimizes total elapsed time is?

- A. CBDA
- B. ACBD
- C. ABCD
- D. ADCB

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932507

Q.38 Which is the term used to identify the process of tacit-to-tacit knowledge conversion?

- A. Socialisation
- B. Externalisation
- C. Combination
- D. Internalisation

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932527

Q.39 In the basic EOQ model, if the cost of placing order doubles and other values remain constant, the EOQ will

- A. Increase by 100%
- B. Increase by 200%
- C. Increase by 41%
- D. Either increase or decrease

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932518

Q.40 If availability is 85%, performance efficiency is 50% and the rate of quality product is 98%, then find out the overall equipment effectiveness

- A. 41.65 %
- B. 42.65 %
- C. 43.65 %
- D. 44.65 %

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932542

Q.41 VMI stands for

- A. Vendor Material Inventory
- B. Vendor Managed Inventory
- C. Variable Material Inventory
- D. Valuable Material Inventory

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932517

Q.42 Total value of final goods and services produced with in a country during a year is

- A. Net national Product (NNP)
- B. Gross National Product (GNP)
- C. Gross Domestic Product (GDP)
- D. National Income (NI)

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

Question ID : 5834932528

Q.43 Under the Child Labour (Prohibition and Regulation) Act, 1986 a child is one who has not completed his age of

- A. 18 Years
- B. 17 Years
- C. 16 Years
- D. 14 Years

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

Question ID : 5834932526

Q.44 If RBI intends to reduce the supply of money as part of anti-inflation policy, it might

- A. Increase Cash Reserve Ratio
- B. Lower Bank Interest
- C. Decrease the SLR
- D. Buy Government Securities in open market

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

Question ID : 5834932530

Q.45 The sequencing of jobs in the ascending order of their processing time, is known as

- A. Shortest Processing Time
- B. Earliest due date (EDD)
- C. Dispatching
- D. None of the above

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

Question ID : 5834932543

Q.46 Consider the following?

- 1) A system-oriented approach
- 2) A multidiscipline team approach
- 3) A function-oriented approach

Which of the above refer to value engineering

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

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932510

Q.47 The actual sales of a product in different months of a particular year are given below:

Sept	Oct	Nov	Dec	Jan	Feb
180	280	250	190	240	?

The forecast of the sales, using the 4-month moving average method for the month of February is _____

- A. 180
- B. 240
- C. 270
- D. 210

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932549

Q.48 For an activity in CPM analysis, the early finish time is 13 and the late finish time is 13, Duration of the activity is 6. Which of the following statement is true?

- A. The early start is 6
- B. The duration of the activity is 13
- C. The slack of the activity is 13
- D. The activity is on the critical path

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932536

Q.49 Which of these layout type is most associated with mass production?

- A. Fixed Position Layout
- B. Product Layout
- C. Process Layout
- D. Cell Layout

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932520

Q.50 Which step in Maslow's hierarchy of needs theory deals with achieving one's potential?

- A. Esteem
- B. Physiological
- C. Self-actualisation
- D. Social

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 5834932522