

09.12.19 Comprehensive Revision Programme-2 Marks:40  
 Std: XI (E,F,G) FN Economics Time:1.15 Hrs

I. Choose the correct answer :- 5x1=5

- Explicit cost plus implicit cost denote \_\_\_\_\_ cost .  
 a) Social                      b) Money                      c) Economic
- Revenue received from the sale of products is known as \_\_\_\_\_ revenue.  
 a) Total revenue              b) Average                      c) Profit
- Production cost expressed in money terms is called \_\_\_\_\_.  
 a) Real cost                      b) Money cost                      c) Sunk cost
- Quasi – rent arises in \_\_\_\_\_.  
 a) Homemade items      b) Man – Made appliances      c) Imported items
- Wages is the reward for \_\_\_\_\_.  
 a) Labour                      b) Land                      c) Capital

II. Answer the following ( Any 5 ) 5x2=10

- What do you mean by interest?
- State the meaning of liquidity preference.
- What is meant by distribution?
- Define cost.
- Give the definition for 'Real cost'.
- Define Revenue.

III. Answer the following (Any -5) 5x3=15

- Briefly explain the subsistence s Theory of wages
- Write a note on Risk – bearing Theory of profit.
- What are the motives of demand for money ?
- State the differences between money cost and real cost.
- Discuss the long run cost curves with suitable diagram.
- State the relationship between AC and MC.

IV. Answer the following (Any -2) 2x5=10

- Explain the Keynesian Theory of Interest.
- Discuss the short run cost curves with suitable diagram.
- Explain the marginal productivity Theory of distribution .

09.12.19 Comprehensive Revision Programme-2 Marks:40  
 Std: XI (H,I) AN Economics Time:1.15 Hrs

I. Choose the correct answer :- 5x1=5

- Planning curve is also called as \_\_\_\_\_.  
 a) Long run average cost curve              b) Envelope curve  
 c) All the above
- Long run average cost curve is also called as \_\_\_\_\_.  
 a) Demand                      b) Production                      c) Planning
- The cost incurred by producing one more unit of output is \_\_\_\_\_ cost.  
 a) Marginal                      b) Fixed                      c) Variable
- Loanable funds Theroy of Interest is called as \_\_\_\_\_.  
 a) Neo – Classical Theory      b) Classical Theory      c) Modern Theroy
- Interest is the reward for \_\_\_\_\_.  
 a) Land                      b) Labour                      c) Capital

II. Answer the following :- (Any-5) 5x2=10

- What is profit ?
- Distinguish between real and money wages .
- Mention the types of distribution.
- Define cost function.
- What do you mean by fixed cost?
- What is meant by Sunk cost?

III. Answer the following (Any -5) 5x3=15

- Distinguish between rent and quasi- rent.
- State the dynamic theory of profit.
- Describe briefly the Innovation theory of profit.
- Distinguish between fixed cost and variable cost.
- Define opportunity cost and provide an example.
- Write a short note on Marginal Revenue.

IV. Answer the following (Any-2) 2x5=10

- Illustrate the Ricardian Theory of Rent.
- If total cost =  $10 + Q^3$  , find out  
 AC, AVC, TFC, AFC, when  $Q = 5$
- Bring out the relationship between AR and MR curve under various price conditions .

I. Choose the correct answer: 10x1=10

1. Net profit is
  - a. debited to capital a/c
  - b. credited to capital A/c
  - c. Debited to drawings a/c
2. Accrued interest on investment will be shown
  - a. on the credit side of profit & loss a/c
  - b. on the asset side of balance sheet
  - c. Both a & b.
3. The Unsold stock at the end of the accounting period.
  - a. Opening stock
  - b. Closing stock
  - c. average stock
4. List-I List-II
  1. Outstanding expenses Debit balance
  2. Prepaid Expenses irrecoverable balance
  3. Accrued Income Unexpired expenses
  4. Bad debits Credit balance
  - a. 4 3 1 2
  - b. 1 2 3 4
  - c. 3 4 2 1
5. \_\_\_\_ is a loss to the business arising out of failure of a debtor to pay the dues.
  - a. cash
  - b. credit
  - c. Trade
6. Which one is not a component of computer System?
  - a. Input
  - b. Output
  - c. Data
7. Accounting software is a example of
  - a. System software
  - b. Application software
  - c. utility software
8. Which of the following is not a method of codification of a/c?
  - a. Access codes
  - b. block codes
  - c. mnemonic codes
9. A computer system mainly has \_\_\_\_\_ components.
  - a. one
  - b. Two
  - c. Three
10. \_\_\_\_\_ packages are used small & convential business enterprises?
  - a. Readymade
  - b. Customised
  - c. Tailor-made

II. Answer the following questions:

11. What is coding? (2 Marks)
12. Mention any 3 limitations of computerised accounting system. (3 Marks)

III. Answer the following: 3x5=15

13. State various types of coding method.
14. The trial balance of trades on 31.12.16 show sundry debtors as Rs.50,000.

Adjustments:

- a. Write off Rs.1000 as bad debts
- b. Provide 5% for doubtful debts
- c. Provide 2% on discount on debtors

Write the adjustments entries and show how these items will appear in profit and loss a/c and balance sheet of trade.

15. Prepare the profit and loss a/c of Manoj for the year ending on 31.3.16

Particulars	Rs.	Particulars	Rs.
Gross profit	25000	Travelling expenses	500
Salaries	5600	Stationery	75
Insurance	200	Rent	650
Discount allowed	400	Interest on loan	225
Discount received	300	Repairs	125
Commission received	100	Office expenses	55
Advertisement	450	General expenses	875
Printing charges	375	Postage	175

Adjustments:

Salary outstanding	400
Rent paid in advance	50
Commission receivable	100

IV. Answer the following question: 1x10=10

From the following trial balance of Subramaniam, prepare his

Trading & Profit and loss a/c and balance sheet as on 31.12.16

Particulars	Rs.	Particulars	Rs.
Stock (1.1.16)	36000	Sundry creditors	44,000
Furniture	62600	Capital	50,000
Sundry debtors	32000	Sales	1,60,000
Bank	6000	Return outward	4000
Purchases	80000	Discount received	2200
Drawings	1000	Bills payable	10600
Return inward	10000		
Salaries	21200		
Freight on purchases	22000		
	<u>2,70,800</u>		<u>2,70,800</u>

Adjustments:

- a. Charge interest on drawings at 8%
- b. Outstanding salaries 3000
- c. Closing stock was valued at Rs.48000
- d. Provide for 5% interest on capital

I. Choose the correct answer: 5x1=5

- For a particular tube, among six harmonic frequencies below 1000Hz, only four harmonic frequencies are given: 300Hz, 600Hz, 750Hz, and 900 Hz. what are the two other frequencies missing from this list?
  - 100 Hz, 150Hz
  - 150 Hz, 450Hz
  - 450Hz, 700Hz
  - 700Hz, 800Hz
- Frequency is 5000Hz travels in air and then hits the water surface. The ratio of its wave length in water and air is \_\_\_\_\_.
  - 4.30
  - 0.23
  - 5.30
  - 1.23
- In a simple harmonic oscillation, the acceleration against displacement for one complete oscillation will be \_\_\_\_\_.
  - an ellipse
  - a circle
  - a parabola
  - a straight line
- A simple pendulum is suspended from the roof of a school bus which moves in a horizontal direction with an acceleration  $a$ , then the time period is \_\_\_\_\_.
  - $T \propto \frac{1}{g^2+a^2}$
  - $T \propto \frac{1}{\sqrt{g^2+a^2}}$
  - $T \propto \sqrt{g^2+a^2}$
  - $T \propto (g^2+a^2)$
- When a damped harmonic oscillator completes 100 oscillations, its amplitude is reduced to 1/3 of its initial value. What will be its initial value? What will be its amplitude when it completes 200 oscillations?
  - 1/5
  - 2/3
  - 1/6
  - 1/9

II. Answer any 5: 5x2=10

- Prove that  $x=A \sin\omega t +B \cos\omega t$  is simple harmonic or not.
- Compare transverse and longitudinal waves.
- Compare progressive and stationary waves.
- Two vibrating tuning forks produce waves whose equation is given by  $y_1=5 \sin (240 \pi t)$  and  $Y_2=4 \sin (244\pi t)$ . Compute the number of beats per second.
- Define Intensity of sound waves.
- Define Interference of waves.

III. Answer any 5: 5x3=15

- Explain the laws of simple pendulum.
- Write a short note on types of vibrations.

- Write the characteristics of stationary waves.
- Describe the formation of beats.
- Derive an expression for vertical oscillations of spring.
- Explain the characteristics of progressive waves.

IV. Answer any 2: 2x5=10

- Compare simple harmonic motion and angular harmonic motion.
- Show that the velocity of a travelling wave produced in a string is

$$V = \sqrt{\frac{T}{\mu}}$$

- Describe Newton's formula for velocity of sound waves in air and also discuss the Laplace's correction.

I. Choose the correct answer:

5x1=5

- Insurance is a means of providing monetary coverage against loss caused by \_\_\_\_.  
a. natural or man-made factors  
b. natural and man-made factors  
c. either a or b  
d. both a and b
- Co-operative stores need a minimum of \_\_\_\_ members.  
a. 20                      b. 23                      c. 24                      d. 25
- Consumers are relatively \_\_\_\_ in nature in case of international business.  
a. homogeneous                      b. heterogeneous  
c. both a and b                      d. none of the above
- Indian Contract Act came into force from \_\_\_\_.  
a. 1875    b. 1874                      c. 1873                      d. 1872
- Performance must be \_\_\_\_.  
a. in & improper form    b. to an improper person  
c. unconditional                      d. conditional

II. Answer the following: [Any 5]

5x2=10

- Who is a legal representative?
- Define contract.
- What is meant by Export trade?
- State the meaning of multiple shops.
- What is retailing?
- List any five important type of policies.

III. Answer the following: [Any 5]

5x3=15

- Who can demand performance?
- What do you mean by agreement?
- Describe the importance of external trade to an economy?
- Explain the characteristics of super markets.
- Give any four points of distinction between live purchase system and installment system of selling.
- Write a note on IRDAI.

IV. Answer the following: [Any 2]

2x5=10

- Describe the role of chambers of commerce in promotion of internal trade.
- Distinguish between internal and international trade.
- Explain the classification of contract on the basis of the formation.

I. Choose the correct answer:

5x1=5

- Shape and hybridisation of  $IF_5$  are \_\_\_\_.  
a. trigonal bipyramidal,  $Sp^3d^2$   
b. trigonal bipyramidal,  $Sp^3d$   
c. square pyramidal,  $Sp^3d^2$   
d. octahedral,  $Sp^3d^2$
- Which one of the following is diamagnetic?  
a.  $O_2$                       b.  $O_2^{2-}$                       c.  $O_2^+$                       d. none of these
- Which of the following is electron deficient?  
a.  $PH_3$                       b.  $(CH_3)_2$                       c.  $BH_3$                       d.  $NH_3$
- The percentage of s-character of the hybrid orbitals in methane, ethane, ethene and ethyne are respectively  
a. 25,25,33.3,50                      b. 50,50,33.3,25  
c. 50,25,33.3,50                      d. 50,25,25,50
- According to VSEPR theory, the repulsion between different parts of electron obey the order  
a.  $1.p-1.p > b.p-b.p > l.p-b.p$                       b.  $b.p-b.p > b.p-l.p > l.p-b.p$   
c.  $1.p-1.p > b.p-l.p > b.p-b.p$                       d.  $b.p-b.p > l.p-l.p > b.p-l.p$

II. Answer the following: [Any 4]

4x2=8

- Define Bond enthalpy.
- Which bond is stronger  $\sigma$  or  $\pi$ ? Why?
- Draw the Lewis structures for the following species.  
(a)  $NO_3^-$                       b.  $HNO_3$
- What type of hybridisation are possible in following geometry?  
a. octahedral                      b. tetrahedral
- Draw the resonance structure of carbonate ion.
- Define dipole moment.

III. Answer the following: [Any 4]

4x3=12

- Write the predictions of ionic character in covalent bond.
- Write important principles of VSEPR theory.
- Explain  $SP^2$  hybridisation in  $BF_3$ .
- Explain Linear combination of atomic orbitals.
- Hydrogen gas is diatomic where as inert gases are monoatomic- explain on the basis of MO theory.

IV. Answer the following: [Any 3]

3x5=15

- Discuss the formation of  $N_2$  molecule using MO theory.
- Describe fajan's rule.
- Explain the bond formation in ethylene.
- Explain coordinate covalent bond with an example.

I. Choose the correct answer:

10x1=10

1. If  $\vec{BA} = 3\hat{i} + 2\hat{j} + \hat{k}$  and the position vector of B is  $\hat{i} + 3\hat{j} - \hat{k}$ , then the position vector A is \_\_\_\_\_.

- a)  $4\hat{i} + 2\hat{j} + \hat{k}$     b)  $4\hat{i} + 5\hat{j}$     c)  $4\hat{i}$     d)  $-4\hat{i}$

2. If ABCD is a parallelogram, then  $\vec{AB} + \vec{AD} + \vec{CB} + \vec{CD}$  is equal to \_\_\_\_\_.

- a)  $2(\vec{AB} + \vec{AD})$     b)  $4\vec{AC}$     c)  $4\vec{BD}$     d)  $\vec{0}$

3. If  $\vec{a}$ ,  $\vec{b}$ ,  $\vec{c}$  are the position vector of the three collinear points, then which of the following is true?

- a)  $\vec{a} + \vec{b} = \vec{c}$     b)  $2\vec{a} = \vec{b} + \vec{c}$     c)  $\vec{b} = \vec{c} + \vec{a}$     d)  $4\vec{a} + \vec{b} + \vec{c} = \vec{0}$

4. If  $\vec{a} = \hat{i} + 2\hat{j} + 2\hat{k}$ ,  $|\vec{b}| = 5$  and the angle between  $\vec{a}$  and  $\vec{b}$  is  $\frac{\pi}{6}$ , then the area of the triangle formed by these two vectors as two sides is

- a)  $\frac{7}{4}$     b)  $\frac{15}{4}$     c)  $\frac{3}{4}$     d)  $\frac{17}{4}$

5. Vectors  $\vec{a}$  and  $\vec{b}$  are inclined at an angle  $\theta = 120^\circ$ . If  $|\vec{a}| = 1$ ,  $|\vec{b}| = 2$  then  $[(\vec{a} + 3\vec{b}) \times (3\vec{a} - \vec{b})]^2$  is equal to \_\_\_\_\_.

- a) 225    b) 275    c) 325    d) 300

6. Two vectors  $\vec{a}$  and  $\vec{b}$  are said to be \_\_\_\_\_ if  $\vec{a} = \lambda\vec{b}$ , where  $\lambda$  is a scalar.

- a) equal    b) constant    c) parallel    d) perpendicular

7. The \_\_\_\_\_ of the vectors  $\vec{a}$  and  $\vec{b}$  is  $\vec{a} \cdot \vec{b} = |\vec{a}| |\vec{b}| \cos\theta$

- a) Vector product    b) Scalar product    c) Addition vector  
d) Void vector

8. The median of triangle are \_\_\_\_\_.

- a) parallel    b) perpendicular    c) concurrent    d) collinear

9. Vectors of magnitude  $\lambda$ , perpendicular to both  $\vec{a}$  and  $\vec{b}$  are

$a\mu \pm \lambda \hat{n} = \underline{\hspace{2cm}}$

- a)  $\sin^{-1} \frac{|\vec{a} \times \vec{b}|}{|\vec{a}| |\vec{b}|}$     b)  $\pm \lambda \frac{(\vec{a} \times \vec{b})}{|\vec{a} \times \vec{b}|}$     c)  $\pm \lambda \left[ \frac{|\vec{a} \times \vec{b}|}{|\vec{a}| |\vec{b}|} \right]$     d) 0

10. If  $\vec{a} = -3\hat{i} + 4\hat{j} - 7\hat{k}$  and  $\vec{b} = 2\hat{i} - 5\hat{j} - 30\hat{k}$  then  $\vec{a} \cdot \vec{b}$  is \_\_\_\_\_.

- a) 30    b) 2    c) -3    d) 0

II. Answer any 3 of the following:

3x2=6

11. Find the area of triangle  $\vec{a} = -\hat{i} + \hat{j}$ ,  $\vec{b} = -\hat{i} + \hat{k}$

12. If  $\vec{a}$  and  $\vec{b}$  represent a side and a diagonal of parallelogram, find the other sides and the other diagonal.

13. Find a unit vector along the direction of the vector  $5\hat{i} - 3\hat{j} + 4\hat{k}$

14. Find the direction ratio and direction cosines of the vectors

i)  $3\hat{i} + 4\hat{j} - 6\hat{k}$

III. Answer any 3 of the following:

3x3=9

15. Show that the vectors  $2\hat{i} - \hat{j} + \hat{k}$ ,  $3\hat{i} - 4\hat{j} - 4\hat{k}$ ,  $\hat{i} - 3\hat{j} - 5\hat{k}$  form a right angled triangle.

16. Find the angle between the vectors  $2\hat{i} + 3\hat{j} - 6\hat{k}$  and  $6\hat{i} - 3\hat{j} + 2\hat{k}$

17. If G is the centroid of a triangle ABC, prove that  $\vec{GA} + \vec{GB} + \vec{GC} = \vec{0}$

18. Find the vectors of magnitude 6 which are perpendicular to both vectors  $\vec{a} = 4\hat{i} - \hat{j} + 3\hat{k}$ ,  $\vec{b} = -2\hat{i} + \hat{j} - 2\hat{k}$

IV. Answer any 3 of the following:

5x3=15

19. If  $\vec{a}$ ,  $\vec{b}$ ,  $\vec{c}$  are position vectors of the vertices A, B, C of a triangle ABC, show that the area of the triangle ABC is

$\frac{1}{2} |\vec{a} \times \vec{b} + \vec{b} \times \vec{c} + \vec{c} \times \vec{a}|$ . Also deduce the condition for collinearity of the points A, B and C.

20. If  $\vec{a}$  and  $\vec{b}$  are vector represented by two adjacent sides of a regular hexagon, then find the vectors represented by other sides.

21. If ABCD is a quadrilateral and E and F are the midpoints of AC and BD respectively, then prove that  $\vec{AB} + \vec{AD} + \vec{CB} + \vec{CD} = 4\vec{EF}$

22. i) The position vectors of the points P, Q, R, S are  $\hat{i} + \hat{j} + \hat{k}$ ,  $2\hat{i} + 5\hat{j}$ ,  $3\hat{i} + 2\hat{j} - 3\hat{k}$  and  $\hat{i} - 6\hat{j} - \hat{k}$  respectively. Prove that the line PQ and RS are parallel.

ii) Verify whether the ratios are direction cosines of vectors or not:

$\frac{1}{\sqrt{2}}, \frac{1}{2}, \frac{1}{2}$

I. Choose the correct answer: 10x1=10

1. If  $\vec{BA} = 3\hat{i} + 2\hat{j} + \hat{k}$  and the position vector of B is  $\hat{i} + 3\hat{j} - \hat{k}$ , then the position vector A is \_\_\_\_\_.

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2. If ABCD is a parallelogram, then  $\vec{AB} + \vec{AD} + \vec{CB} + \vec{CD}$  is equal to \_\_\_\_\_.

- a)  $2(\vec{AB} + \vec{AD})$     b)  $4\vec{AC}$     c)  $4\vec{BD}$     d)  $\vec{0}$

3. If  $\vec{a}, \vec{b}, \vec{c}$  are the position vector of the three collinear points, then which of the following is true?

- a)  $\vec{a} + \vec{b} = \vec{c}$     b)  $2\vec{a} = \vec{b} + \vec{c}$     c)  $\vec{b} = \vec{c} + \vec{a}$     d)  $4\vec{a} + \vec{b} + \vec{c} = \vec{0}$

4. If  $\vec{a} = \hat{i} + 2\hat{j} + 2\hat{k}$ ,  $|\vec{b}| = 5$  and the angle between  $\vec{a}$  and  $\vec{b}$  is  $\frac{\pi}{6}$ , then the area of the triangle formed by these two vectors as two sides is

- a)  $\frac{7}{4}$     b)  $\frac{15}{4}$     c)  $\frac{3}{4}$     d)  $\frac{17}{4}$

5. Vectors  $\vec{a}$  and  $\vec{b}$  are inclined at an angle  $\theta = 120^\circ$ . If  $|\vec{a}| = 1$ ,  $|\vec{b}| = 2$  then  $[(\vec{a} + 3\vec{b}) \times (3\vec{a} - \vec{b})]^2$  is equal to \_\_\_\_\_.

- a) 225    b) 275    c) 325    d) 300

6. Two vectors  $\vec{a}$  and  $\vec{b}$  are said to be \_\_\_\_\_ if  $\vec{a} = \lambda\vec{b}$ , where  $\lambda$  is a scalar.

- a) equal    b) constant    c) parallel    d) perpendicular

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8. The median of triangle are \_\_\_\_\_.

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$a\mu \pm \lambda\hat{n} = \underline{\hspace{2cm}}$

- a)  $\sin^{-1} \frac{|\vec{a} \times \vec{b}|}{|\vec{a}| |\vec{b}|}$     b)  $\pm \lambda \frac{(\vec{a} \times \vec{b})}{|\vec{a} \times \vec{b}|}$     c)  $\pm \lambda \left[ \frac{|\vec{a} \times \vec{b}|}{|\vec{a}| |\vec{b}|} \right]$     d) 0

10. If  $\vec{a} = -3\hat{i} + 4\hat{j} - 7\hat{k}$  and  $\vec{b} = 2\hat{i} - 5\hat{j} - 30\hat{k}$  then  $\vec{a} \cdot \vec{b}$  is \_\_\_\_\_.

- a) 30    b) 2    c) -3    d) 0

II. Answer any 3 of the following: 3x2=6

11. Find the area of triangle  $\vec{a} = -\hat{i} + \hat{j}$ ,  $\vec{b} = -\hat{i} + \hat{k}$

12. If  $\vec{a} = 2\hat{i} + 2\hat{j} + 3\hat{k}$ ,  $\vec{b} = -\hat{i} + 2\hat{j} + \hat{k}$  and  $\vec{c} = 3\hat{i} + \hat{j}$  be such that  $\vec{a} = \lambda\vec{b}$  is perpendicular to  $\vec{c}$  then find  $\lambda$ .

13. Find a unit vector along the direction of the vector  $5\hat{i} - 3\hat{j} + 4\hat{k}$

14. Find the direction ratio and direction cosines of the vectors

i)  $3\hat{i} + 4\hat{j} - 6\hat{k}$

III. Answer any 3 of the following: 3x3=9

15. Show that the vectors  $2\hat{i} - \hat{j} + \hat{k}$ ,  $3\hat{i} - 4\hat{j} - 4\hat{k}$ ,  $\hat{i} - 3\hat{j} - 5\hat{k}$  form a right angled triangle.

16. Find the angle between the vectors  $2\hat{i} + 3\hat{j} - 6\hat{k}$  and  $6\hat{i} - 3\hat{j} + 2\hat{k}$

17. For any two vectors  $\vec{a}$  and  $\vec{b}$ , prove that  $|\vec{a} \times \vec{b}|^2 + (\vec{a} \cdot \vec{b})^2 = |\vec{a}|^2 |\vec{b}|^2$

18. Find the vectors of magnitude 6 which are perpendicular to both vectors  $\vec{a} = 4\hat{i} - \hat{j} + 3\hat{k}$ ,  $\vec{b} = -2\hat{i} + \hat{j} - 2\hat{k}$

IV. Answer any 3 of the following: 5x3=15

19. If  $\vec{a}, \vec{b}, \vec{c}$  are position vectors of the vertices A, B, C of a triangle ABC, show that the area of the triangle ABC is

$\frac{1}{2} |\vec{a} \times \vec{b} + \vec{b} \times \vec{c} + \vec{c} \times \vec{a}|$ . Also deduce the condition for collinearity of the points A, B and C.

20. If  $\vec{a}$  and  $\vec{b}$  are vector represented by two adjacent sides of a regular hexagon, then find the vectors represented by other sides.

21. Let  $\vec{a}, \vec{b}, \vec{c}$  be unit vectors such that  $\vec{a} \cdot \vec{b} = \vec{a} \cdot \vec{c} = 0$  and the angle between  $\vec{b}$  and  $\vec{c}$  is  $\frac{\pi}{3}$ . Prove that  $\vec{a} = \pm \frac{2}{\sqrt{3}} (\vec{b} \times \vec{c})$

22. i) The position vectors of the points P, Q, R, S are  $\hat{i} + \hat{j} + \hat{k}$ ,  $2\hat{i} + 5\hat{j}$ ,  $3\hat{i} + 2\hat{j} - 3\hat{k}$  and  $\hat{i} - 6\hat{j} - \hat{k}$  respectively. Prove that the line PQ and RS are parallel.

ii) Verify whether the ratios are direction cosines of vectors or not:

$\frac{1}{\sqrt{2}}, \frac{1}{2}, \frac{1}{2}$