## F.y. Blom Sem I Nov, 2017 Commerce I

Q.P. Code: 00351

[Marks:100]

[Time: Three Hours] Please check whether you have got the right question paper. 1. All questions are compulsory. N.B: (10)(A) Fill in the blanks (Any ten) 0.1 Business is a \_\_\_\_ activity. (a) Organised (b) Social (c) profit-making Creation of wealth is one \_\_\_\_\_\_objective of business. (c) Political (b) Economic (a) Social Global business leads to (b) Inter-dependence of countries (c) Free countries (a) Independent countries \_\_strategy. Turnaround is a \_\_\_ (c) Long term (a) Medium term (b) Short term environment. Society is one factor affecting \_ (c) Economic (b) Micro is a trading block consisting of south Asian countries. (c) ASEAN (b) SAARC (a) EU by an entrepreneur. Project report is used as \_\_\_\_\_ (c) Project planning tool (b) Communication proof (a) Bank document business potentially. Feasibility studies \_\_\_ (c) Forecasts (b) Estimate (a) Calculation Companies intimate DIN to\_ (c) Government (b) CCI (a) ROC business idea. 10. An entrepreneur \_\_\_\_\_ (c) Conceives (b) Debates (a) Reject designs service for SSI's. 11. (c) NIESBUD. (b) NSIC of the family. Women entrepreneur are \_\_\_\_ (c) Anchor (b) Outside (a) Dependents (10) 0.1 (B) State True or False (Any Ten) Creation of employment opportunities is one function of business. Business firms have social responsibility only towards employees. 2 Importance of public sector increased under liberalization. 3 Tertiary industry provides intangible goods. Business objectives are the ends towards which the activities of an organization are aimed. Downsizing refers to retrenchment of surplus manpower of the business. Cultural environment does not influence demand for goods and services. GATS is an agreement of WTO. 9 Feasibility study of a project refers to finding out the practical utility or the future prospects of a project.

Provident fund registration is not compulsory if the size of workforce is 20 or more.

Indian institute of entrepreneur (IIE) has a special focus for entrepreneurship development in northen

Entrepreneurship is an economic activity.

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H.C

Q.P. Code :19575

|  |                     | [Time: Three Hours]   | ] 50(38766);3195 |
|--|---------------------|---|------------------|
|  |                     | Please check whether you have got the right question paper.   |                  |
| 82                                       | B:                  | All questions are compulsory.   |                  |
| 14,                                      | D.                  | 2. All questions have internal choice.  |                  |
|  |                     | Draw neat diagrams wherever necessary.  |                  |
|  |                     | Use of simple calculator is permitted.  |                  |
|  |                     | 5. Figures to the right indicate full marks.  | 133              |
|  |                     | 1. 984  | 5236-3862        |
|  |                     | to the statement and rewrite the statement  | (Anv Ten) 10     |
| A) :                                     | Select              | t the best answer from the given options and rewrite the statemen   | 3527733          |
| i)                                       | O                   | pportunity Cost is the  | 1 3 3 6 3 8      |
|  | 2)                  | Price of a good or service  | 88888            |
|  | b)                  | All out-of-pocket costs   | 12887            |
|  | c)                  | Value of the best alternative sacrificed  |                  |
|  | <b>d</b> )          | Price that exceeds market price   | 888              |
| 227                                      | **                  | Kommoner's lowers the price of its pizzas,  | 11               |
| 11)                                      | 11                  | Demand for Queen's pizzas increases   |                  |
|  | a)                  | Demand for Kommoner's pizzas increases  |                  |
|  | b)                  | Demand for Queen's pizzas decreases   |                  |
|  | C)                  | Demand for Queen's precion  |                  |
|  | a)                  | Both b and c  |                  |
|  | -yes                | se supply curve illustrates how   |                  |
| iii)                                     |                     | A CONTRACT OF THE PROPERTY OF |                  |
|  | a)                  | Quantity supplied increases as price increases  |                  |
|  |                     | The supposes of technology selections   |                  |
|  | C)                  | Quantity supplied increases as resource price decreases   |                  |
|  | <b>a</b> )          | Quantity supplied measure   |                  |
| ív)                                      | De                  | emand is relatively inelastic when  |                  |
| 20)                                      | 2)                  | Ea=1  |                  |
|  |                     | E <sub>4</sub> >1.  |                  |
|  | c)                  | Et < 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1  |                  |
|  | d                   | Ed=0. State of State |                  |
|  |                     |   | fiv demanded we  |
| v) -                                     | W                   | hen a 1% change in price leads to more than 1% change in quant  |                  |
| 17                                       | 132                 | y demand is-  |                  |
| 4  | 21                  | Relatively elastic  |                  |
| A ST                                     | b)                  | Relatively inelastic  |                  |
| 35                                       | 50                  | -Unit elastic   |                  |
| 83                                       | (d)                 | None of the above   |                  |
| 2/3                                      | 19 3                | 735883  |                  |
|  | Sign                | 39833   |                  |
| A 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 1. FT - AT 18. 1. 5 |   |                  |

| v1)   | Delphi method is a   |
|-------|--|
|       | a) Survey method   |
|       | b) Statistical method  |
|       | c) Both a and b  |
|       | d) None of the above   |
| vii)  | For Ford Motor Company, all of the following are sources of economies of scale |
|       | except   |
|       | a) Mass production techniques used in the manufacturing of autos               |
|       | b) Bureaucracy and red tape encountered as the firm becomes larger             |
|       | c) Learning by doing which allows workers to become more productive            |
|       | d) Additional specialisation made possible by large scale production           |
| viii) | The negative slope of the iso-quant is due to                                  |
|       | a) Diminishing marginal rate of technical substitution                         |
|       | b) Zero marginal rate of technical substitution                                |
|       | c) Marginal rate of technical substitution is greater than one                 |
|       | d) None of the above   |
| ix)   | When a firm experiences economies of scale,                                    |
|       | a) The long run average cost curve slopes downward                             |
|       | b) The long run average cost curve is vertical                                 |
|       | c) The long run average cost curve slopes upward                               |
|       | d) The long run average cost curve is horizontal                               |
| x)    | An economist would argue that accountants tend to                              |
| .,    | a) Understate costs and overstate profits                                      |
|       | b) Understate costs and understate profits                                     |
|       | c) Overstate costs and understate profits                                      |
|       | d) Overstate costs and overstate profits                                       |
|       |  |
| xi)   | Sunk cost means  |
| ,     | a) Cost that is recovered  |
|       | b) Cost of foregone alternatives   |
|       | c) Both a and b  |
|       | d) Neither a nor b   |
| xii)  | Breakeven point is reached when a firm   |
|       | a) Earns zero profit   |
| 1     | b) Covers fixed cost   |
|       | c) Covers variable cost  |
| 3     | d) All of the above  |
| 30,13 |  |
| E at  |  |

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08

## B) Match the concept with its appropriate definition/explanation/description. Any Ten.

|       | Concept                          | Definition /Explanation /Description   |
|-------|----------------------------------|--|
| )     | Opportunity cost                 | a] Cost of an additional batch   |
| 1)    | Graph                            | b] Value of the best alternative sacrificed  |
| ni)   | Law of supply                    | c] Delphi method   |
| iv)   | Perfect competition              | d] Price line  |
| v)    | Survey method                    | e] Initial cost of buying an asset   |
| vi)   | Promotional elasticity of demand | f] Price and quantity supplied are positively related                                  |
| vii)  | Iso-cost line                    | g] Impact of change in advertising expenditure on quantity demanded                    |
| viii) | Internal diseconomies of scale   | h] Benefits of joint production  |
| ix)   | Economies of scope               | i] Cost-volume profit analysis   |
| x)    | Historical cost                  | j] Horizontal demand curve   |
| xi)   | Incremental cost                 | k] An increase in the scale of production of the firm results in rise in cost per unit |
| xii)  | Breakeven analysis               | Diagrammatic representation of a function  |

## Attempt A and B OR C and D

- A) What is business economics? Discuss the relationship between economic concepts and business decisions.
- B) Given the following data, Calculate TR, AR, and MR. Explain the relationship between

| a) TR and MR and b) AR and MR | 30   | 4     |   |
|-------------------------------|------|-------|---|
|                               |      |       | _ |
| P 100 90 8                    | 80 7 | 70 60 |   |

#### OR

# C) The following table describes the market for floppy discs before pen drives were

| Price (Rs) | Quantity Demanded of floppy discs | Quantity Supplied of floppy<br>discs. |
|------------|-----------------------------------|---------------------------------------|
| 100        | 1500                              | 700                                   |
| 200        | 1300                              | 900                                   |
|            | 1100                              | 1100                                  |
| 300        | 900                               | 1300                                  |
| 400        | 700                               | 1500                                  |
| 500        | 100                               | t the same base                       |

- Plot the demand and supply curves from the table given above.
- What is the equilibrium price and equilibrium quantity?

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- At the price of Rs. 200 what is the equilibrium quantity demanded and quantity supplied?
- iv) When pen drives were introduced the demand for floppy discs decreased. Does the new demand curve shift to the left or right of the original demand curve?
- D) Using diagrams explain the causes of changes in demand in terms of movement along and shifts in the demand curve.

#### Attempt A and B OR C and D

- A) What are the determinants of demand?
- B) Given the following data, calculate price elasticity of demand for wheat when price increases and when price decreases. State whether the demand for wheat is elastic or inelastic.

| Price of wheat | Market demand for wheat |
|----------------|-------------------------|
| 15             | 5000 5000 5000          |
| 20             | 4500 - 4005             |

#### OR

- C) What is demand forecasting? Explain the various types of demand forecasting.
- D) Explain the least squares method of demand forecasting.

#### Attempt A and B OR C and D

- A) What are isoquants? Explain the properties of isoquants.
- B) Explain the law of variable proportions. 07

#### OR

- C) Explain the least cost combination as producer's equilibrium.
- D) Explain external economies and diseconomies of scale. 07

#### .5 Attempt A and B OR C and D

- A) Distinguish between short run and long run costs. 08
  - B) Given TFC as 55 and the following data, calculate TVC, MC, AFC, AVC and AC Q 1 2 3 4 5

Q 1 2 3 4 5 TC 75 90 110 135 170

OR

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07

08

## Q.P. Code:19575 C) Derive the LAC curve using the short run average cost curves of a firm. Why is it called 68 a planning curve? D) What is the learning curve? Explain with a diagram. Attempt A and B OR Write short notes on any four. A) Explain changes in equilibrium due to: a) Changes in demand and b) Changes in supply B) What is the breakeven point? Using diagrams explain how the breakeven point changes when there are changes in price and variable cost. Write Short Notes. Any Four Functions and equations Steps of demand forecasting ii) Types of isoquants iii) iv) Internal economies of scale . Fixed and variable cost Limitations of breakever analysis (iv

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Q. P. Code:-24691

NB: (1) All questions are compulsory

(2) Figures to the right indicate full marks

Total marks: 75

Time: 2 1/2 hours

1(A) Choose the correct alternative (any 8)

(08)

- 1. The Indian languages belong to --- language families. (3, 2, 4)
- Scheduled castes are not found in -----.
   (Punjab, Mizoram. Uttar Pradesh)
- One of the characteristics of urban centres is all places with a population of at least -----. (2000, 5000, 4000)

5. Gender is a ---- concept. (Sociological, Economic, Biological)

- 6. Mongoloids, Negritoes and Austroloids are examples of Indian ---- groups.

  (Rural, Tribal, Linguistic)
- 7. There are ----- schedules in the Indian Constitution. (12, 13, 14)
- 8. India is a ---- of states.

(Union, Federation, Confederation)

 India has a ---- Party System. (Multi, Dual, Single)

10. The 73<sup>rd</sup> amendment to the Indian Constitution regarding Panchayati Raj was passed in ----.

(1990, 1991, 1992)

(B) State whether the following statements are true or false. (Any 7)

(07)

- 1. English is the secondary official language of the Indian Union.
- 2. A Secular State is that in which religions are treated unequally.

3. Sikhism is a monotheistic religion.

4. The sex ratio in India has always remained unfavourable to women.

5. Each tribal group of India has a language of its own.

6. Children's education is every parent's Fundamental Duty according to Indian Constitution.

7. Caste is an endogamous group in the Indian society.

8. The Indian Constitution is a completely original work of the Constituent Assembly.

9. There are 10 Fundamental Duties enshrined in the Indian Constitution.

10. The Shiromani Akali Dal and the Asom Gan Parishad are examples of regional parties in India.

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| Q. P. Code:-2   | 4691       |
|---|------------|
| 2 a. Clarify the term violence against women and comment on the various manifestations of violence against them in contemporary India.  | (15)       |
| OR  2 b. Explain the manifold problems faced by the disabled in the country.  |            |
| 3 a. Examine the various causes of regionalism in India with suitable examples.   | (15)       |
| OR 3 b. Explain the term Caste. What are the inequalities caused by the Caste system in Ir  | día?       |
| 4 a, Examine the importance of the Fundamental Duties in the Indian Constitution.   | (15)       |
| 4 b. Explain the following features of the Constitution  a. Fundamental Rights  b. Federal System  c. Independence of the Judiciary  5. a Explain the various socio-economic and cultural obstacles in the effective par of women in Indian politics.               | ticipation |
| 5. b Write short notes on any three.  a. Any two aspects of diversity in the Indian culture b. The rural urban divide in India c. Shortcomings of the party system in India. d. Major features of the 74th amendment e. Representation of women by the Indian media | (15)       |
| Page 2 of 4   | 2          |

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Q. P. Code:-24691

## (मराठी क्पांतर)

| स्चनाः १) सर्व प्रश्न अनिवार्य आहेत.  | 196884   |
|---|--|
| २) उजवीकडील अंक पूर्ण गुण दर्शवितात.  | पक्षण गुण: ७५<br>वेळ: २ साम ३० औ.  |
| प्राशन १ अ) योग्य पर्याय निवडा.( कोणतेही आठ)  | (00)   |
| १, भारतीय भाषा भाषासामुहाचा भाग आहेत. (३  | AND THE PROPERTY OF THE PARTY O |
| २ या राज्यात अनुसूचित जातीचे लोक आढळून  | ARE STOLEN AND SHOULD BE STOLEN AND SHOULD BE STOLEN AND AND SHOULD BE |
| (पंजाब, मिझोराम, उत्तर प्रदेश)  |  |
| <ol> <li>भारतीय घटनेने या कलमाद्वारे सकारात्म</li> </ol>  | क भेदभावाची तस्तूद केली आहे.   |
| (१५, १४, १७)  |  |
| ४. शहरी केंद्रांचे एक वैशिष्ट्य म्हणजे सर्व ठिकाणी किमान  | ं लोकसंख्या  |
| (प्रकीती सती, शक्ती)  | 95,45,33,35,65   |
| मंकल्पना आहे. (समाजशास  | त्रीय, आर्थिक, जीवशास्त्रीय)   |
| ६. मंगोलॉइडस, नेग्रिटोस, आणि ऑस्ट्रोलॉइडस हि भारतीय   | समूहाची उदाहरणे आहेत.  |
| ( के अपनिवासी भाषिक) व उपनिवासी अपनिवासी  | 15 5 7 8 C F   |
| ्येरिशिष्ट आहेत.  | (12, 13, 18)   |
| ्रभूपान मान्यांना/चे (सध् सवराज्य   | , राष्ट्रमडळ)  |
| ९. भारतात पक्षपद्धती आहे. (बहु, द्वि, एक)   | मानी झाली (१९९०, १९९१, १९९२)   |
| % पंचायन गान्यामंदर्भातील ७३ वा घटनादुरूरा  |  |
| प्रश्न १ ब) खालील विधाने चूक कि बरोबर आहेत ते सांगा (कोणा   | तेही सात) (०७)   |
|   |  |
| १. इंग्रजी हि भारतीय संघाची दुसरी कार्यालयीन भाषा आहे.  | मान वागणूक दिली जाते.  |
| २. धर्मनिरपेक्ष राज्य म्हणज अर्   |  |
| <ol> <li>शीख धर्म एकेश्वरवादी आहे.</li> </ol>   | राहिले आहे.  |
| ४. भारतात लिंग गुणीत्तरात नहमाच नावण<br>५. भारतातील प्रत्येक आदिवासी समूहाची आपली एक भाष  | । आहे.   |
| प्रतातील प्रत्येक आदिवास पर्या है प्रत्येक पालकाचे  | मूलभूत कर्तव्य आहे.  |
| ६. भारतीय घटनेनुसार, मुलाप पर<br>७. भारतीय समाजात जात हा अंतर्विवाह समूह आहे.   |  |
| ७, भारतीय समाजात जात हा अंतविवाह समूह जार.<br>८, भारतीय राज्यघटना हि पूर्णपणे घटनासमितीची अस्सल<br>८, भारतीय राज्यघटना हि पूर्णपणे घटनासमितीची अस्सल            | निर्मिती आहे.  |
| ८ भारतीय राज्यघटना हि पूण्पण वर्ण अंतर्भूत आहेत<br>१ भारतीय राज्यघटनेत १० मूलभूत कर्तव्ये अंतर्भूत आहेत<br>१ भारतीय राज्यघटनेत १० मूलभूत कर्तव्ये अंतर्भूत आहेत | ा.   |
| र भारतीय राज्यघटनेत १० मूलभूत कर्तव्ये अतभूत आहत<br>१. भारतीय राज्यघटनेत १० मूलभूत कर्तव्ये अतभूत आहत<br>१० शिरोमणी अकाली दल आणि असोम गण परिषद हि प्र           | दिशिक पद्माचा उदाहरेन उत्तरम   |
| १० शिरोमणी अकाली दल आणि अतारी<br>प्रश्न २ अ) स्त्रियांवरील अत्याचार म्हणजे काय ते सांगा आणि   | वर्तमानकाळात भारतामध्ये  |
| प्रश्न २ अ) स्त्रियांवरील अत्याचार म्हणा  | 2  |
| Page 3 of 4   |  |

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# C0141 / C0537 FOUNDATION COURSE I

Q. P. Code:-24691

| स्वियांवरील भ  | 24031 |
|--|-------|
| स्त्रियांवरील अत्याचाराच्या वेगवेगळ्या प्रकारांवर टिप्पणी करा.   |       |
| किंवा  | (19)  |
| पश्न २ हो देशात अपंतांचा क्रिक्स १   | 96    |
| प्रश्न २ ब) देशात अपंगांना कोणत्या वेगवेगळ्या समस्यांना सामोरे जावे लागते त्याचे वर्णन करा.                      | (89)  |
| प्रश्न ३ अ) भारतातील प्रादेशिकतावादाच्या विविध कारणांचे उदाहरणासहित परीक्षण करा.                                 | (64)  |
| किंवा में केंद्रिया है   |       |
| प्रश्न ३ ब) जात हि संज्ञा स्पष्ट करा. भारतात जातीव्यवस्थेमुळे कोण्द्या असमानता निर्माण                           |       |
| झाल्या आहेत?   | (84)  |
| प्रश्न ४ अ) भारतीय राज्यघटनेमध्ये मुलभूत कर्तव्यांच्या असलेल्या महत्वाचे परीक्षण करा.                            | (84)  |
| िकंवा  |       |
| प्रश्न ४ ब) भारतीय राज्यघटनेची खालील वैशिष्ट्य स्पृष्ट करी   | (83)  |
| अ) मूलभूत हक्क   |       |
| ब) संघराज्य व्यवस्था विविधिति । व   |       |
| क) न्यायालयाचे स्वातंत्र्य   |       |
| प्रश्न ५ अ) भारतीय राजकारणातील स्त्रियांच्या प्रभावी सहभागामध्ये येणाऱ्या विविध                                  |       |
| सामाजिक-आर्थिक आणि सांस्कृतिक अडथळे स्पष्ट करा.  | (64)  |
| किंद्रा के कि |       |
| प्रश्न ५ ब) टीपा लिहा (कोणत्याही तीन)  | (84)  |
| १ भारतीय संस्कृतीमधील विविधतेची कोणतीही दोन वाशष्ट्य   |       |
| ्र भाग्नातील ग्रामीण-शहर <sup>।</sup> पुरः   |       |
| वार्यस्तितिल उटा   |       |
|  |       |
| ४. ७४व्या घटनादुरुस्तापा अर्थ<br>५. स्त्रियाचे भारतीय प्रसार माध्यमांमधील प्रकटीकरण                              |       |
| ***************************************  |       |

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## Maths & Stats FY Blom Sem I Nov, 2017.

Q.P. Code :19436

|  |                      | [Time: 3 Hours] [Ma  | rks:100]           |
|--|----------------------|--|--------------------|
|  |                      | Please check whether you have got the right question paper.  All questions are compulsory.   |                    |
| STATE OF THE PARTY | 2.                   | Figures to the right indicates marks allotted.   |                    |
|  |                      | Section - I  |                    |
|  |                      | 2 C Novine   | 200                |
| 1  | Attempt Any Four fr  | rom the following:   | [05]               |
|  | A) If the market pri | ice of a share with face value Rs.100 is Rs.130, how many shares of the company or Rs.3263, brokerage being 0.4%.  | as [05]            |
|  |                      | g Industry issued some shares of face value Rs.10 each. A dividend of Rs. 7500 w<br>e company at 2.5% per share. Find number of shares issued by the company.  | as [03]            |
|  | declared by the      | company at 2.5% per share. Find hard 1200 units of a mutual fund by investing Rs.60000, if the entry load was 2%, fir  | nd [05]            |
|  | () Neil purchased    | 1 1200 units of a mutual fullu by in the second sec |                    |
| N.   |                      |  |                    |
|  | KS.5 per unit        | : if there is no entry of the the there is no entry of the there is no entry of the there is no  | for 5 [05]         |
|  | Was Rs. 10.05        | was given on 20-4-2012. Howing was given on 20-4-2012. Howing was given on 20-4-2012. We want and exit load.  Sometimes of the second of the entry load being 2.5% throughout for these montages cost averaging method, the entry load being 2.5% throughout for these montages.   | 200                |
|  | cost using Ru        | upee cost averaging medical and a second sec | rorl               |
| (  | 0.2 Attempt Any For  | ur from the followings of the formed. In how many ways the   | [05]               |
|  | A) From 4 prof       | fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed. In how many ways the fessors and 6 students, a committee of 4 is to be formed using the digits 1,2,3,4,5,6 such that numbers of 5 digits can be formed using the digits 1,2,3,4,5,6 such that   | [05]               |
|  | committee            | es digits can be formed using the dist   |                    |
|  | B) How many i        | git is repeated  | ket- [05]          |
|  | ii) repet            | git is repeated git is allowed git is allowed git is allowed git is allowed git in a cricket team choose a Captain, Vice-captain and wich gives out of 11 members of a cricket team choose a Captain, Vice-captain and wich gives give git in a cricket team choose a Captain, Vice-captain and wich gives give git in a cricket team choose a Captain, Vice-captain and wich gives give give give give give give give give  | [05]               |
|  | keeper fro           | mays out of 1745; mays out of  |                    |
|  | D) Solve the l       | linear programming p   |                    |
|  |                      | いた。これのでのなりません。   | over of [05]       |
|  | Subjection           | x+3y≥3<br>xy≥0 two types of crackers, rockets and bombs packed in the basic assembly operation. Factory II p   | erforms<br>eek and |
| The state of the s | the finis            | 2x+y≥2.  x+3y≥3.  x,y≥0  **r manufacturer produces two types of crackers, rockets and bombs packed in the company is factory. I performs the basic assembly operation. Factory II performs the basi  | iours on           |
| VII  | The pro              | late the LPP to maximize   |                    |
| 3  |                      | Page 1 of 3  |                    |
|  |                      | AD55F62224318ABD441CFBD7670ADEC9   | 1.                 |
| 100  |                      | ADD  |                    |

#### SECTION-II

| A) Find the median and the fifth decile  Class Interval 5-10 |   |   | 15   | .20  | 25-30  | 35-40              | 330   |
|--|---|---|--|--|--|--------------------|-------|
|  | frequency   | 16                                      | 13   | 4  | 13   | 17                 |       |
|  |   | 10                                      | -  | 7  | 13   | VEST PA            | 300   |
|  | e merits and demerit  |   |  |  |  |                    |       |
| ) Draw   | a histogram and he  | nce locate                              |  | phically for t   |  | distribution of ma | rks:  |
|  | Marks   |   | 20-30  | 30-40  | 40-50  | 50-60              | S. C. |
|  | No. of studer   | nts                                     | 11   | 15   | 24   | 14                 | 335   |
|  |   |   |  |  | 3325   |                    | 33    |
| D) From the following frequency distri                       |   |   | 1000   | The second secon | THE RESERVE OF THE PARTY OF THE | 5                  |       |
|  | X   | 5                                       | 6  | 7  | 8  | 10                 |       |
|  | frequency   | 3                                       | 7  | 4  | 2  | 200393             |       |
| Eart   | he following data, fir  | nd the com                              | hined mean   | Also find whi  | ich erman has  | more variation.    |       |
| roit   | ne ronowing data, in  | na anc com                              | Gro  |  | Gr   | oup II             |       |
|  | Number of ar  | ticles                                  |  |  |  | 90                 |       |
|  | Mean 75   |   |  | 82   |  |                    |       |
|  |   | 16                                      |  |  | 49   |                    |       |
|  | Variance  |   | 202  | 25000  | 33598  |                    |       |
| i) Co<br>) Two<br>i)<br>ii)                                  | ne the following term<br>mplementary event<br>unbiased dice are the<br>Number on first die<br>Sum of numbers on | nrown. Fin<br>is less tha<br>the two di | d the probab<br>n number on<br>ice is 8.   | lity that<br>second die.   | a de la companya de l |                    |       |
|  | A)=1/2, $P(B)=1/3$ .  | P(AUB) = 1                              | 10 Line Clu  | 33   |  |                    |       |
| ) If P(  | following table show  | vs a Probal                             | bility Distribu  | ition of a Ran   | ndom Variabl   | eX.                |       |
| ) If P(  | following table show  | -1                                      | The state of the s | 1  | 0.2  | 0.2                |       |
| ) If P(<br>) The   |   | 0.1                                     | 0.25   | 0.25   | 0.2  |                    |       |
| ) If P(  | POXI  |   | 2000   | The second second  |  |                    |       |
| ) If P(  | P(X)  | 98800                                   | - 0 5 mm   |  |  |                    |       |
| ) The  | V 15 6 6 3.   | GO PCX                                  | 6 3 S(iii) V   | (X)  | planing card   | s Find the probab  | ility |

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# Q.5 Attempt Any Four from the following:

A) For the following pay off table, suggest the best decision by using, i) Maximax criterion ii) Maximin criterion iii) Laplace criterion

[05]

| nature | SI | 52 | \$3 | S4 |
|--------|----|----|-----|----|
| Δ1     | 57 | 24 | 37  | 50 |
| A2     | 24 | 28 | 32  | 13 |
| A3     | 12 | 34 | 26  | 44 |

B) Draw a decision tree for the following decision making problem and suggest the best decision:

| for the following nature | S1  | S2  | \$3 |
|--------------------------|-----|-----|-----|
| ection                   | 34  | 20  | 18  |
| A1                       | 14  | 16  | 12  |
| A2<br>Probability        | 0.2 | 0.3 | 0.5 |

C) Define the following along with examples:

[05]

- i) Acts
- ii) States of Nature

| ٥ | 63 | ú  |   | ù |
|---|----|----|---|---|
| 1 | w  | п  | э |   |
| н | ĸ  | e. |   | ы |

| The following is demand distri | bution of a certain | 11   | 12   |
|--------------------------------|---------------------|------|------|
| No. of units demanded          | 10                  | 2.10 | 0.25 |
| probability                    | 0.35                | 0.40 | 0.00 |

The product is sold at Rs. 100 per unit with cost price Rs. 70 per unit. Prepare a payoff tables and decide the best decision. The unit not sold is wasted.

E) For the following pay off table, suggest the best decision by EOL method

| 16   | 10  |
|--|-----|
| The same of the sa |     |
| 7 8 5 15   | 16  |
| 10   | 14  |
| 0.3  | 0.3 |
|  | 18  |

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