**(2021 Batch onwards)**

Reg. No: ☐☐☐☐☐☐☐

# St Aloysius College (Autonomous)

# Mangaluru

## B.A. Semester I – Degree Examination

### December - 2022

### HISTORY – OPEN ELECTIVE

### CULTURAL HISTORY OF KARNATAKA

### (CE 3 - CE 10) PART- I

Time: 2½ Hours

Max. Marks: 60

Note : Answer all questions to the point without exceeding the maximum limit of pages.

ಎಲ್ಲಾ ಪ್ರಶ್ನೆಗಳಿಗೆ ಪುಟದ ಮಿತಿಯನ್ನು ಮೀರದಂತೆ ಸಮರ್ಪಕವಾಗಿ ಉತ್ತರಿಸಿ.

## SECTION - A

**I  Answer any TWO of the following in 3 pages each.** (15×2=30)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಎರಡು ಪ್ರಶ್ನೆಗಳಿಗೆ ಮೂರು ಪುಟದಷ್ಟು ಉತ್ತರಿಸಿ.

1. Explain the folk dances and folk songs of coastal Karnataka.
   ಕರಾವಳಿ ಕರ್ನಾಟಕದ ಜನಪದ ನೃತ್ಯಗಳು ಮತ್ತು ಜನಪದ ಹಾಡುಗಳನ್ನು ವಿವರಿಸಿ.

2. Discuss about the agraharas in ancient Karnataka.
   ಪ್ರಾಚೀನ ಕರ್ನಾಟಕದ ಅಗ್ರಹಾರಗಳ ಬಗ್ಗೆ ಬರೆಯಿರಿ.

3. Trace the origin and growth of Vaishnavism in ancient Karnataka.
   ಪ್ರಾಚೀನ ಕರ್ನಾಟಕದಲ್ಲಿ ವೈಷ್ಣವ ಪಂಥದ ಮೂಲ ಮತ್ತು ಬೆಳವಣಿಗೆಗಳನ್ನು ನಿರೂಪಿಸಿ.

## SECTION – B

**II  Answer any THREE of the following in a page each.** (3×5=15)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಮೂರು ಪ್ರಶ್ನೆಗಳಿಗೆ ಒಂದು ಪುಟದಷ್ಟು ಉತ್ತರಿಸಿ.

1. Explain the land grants of the Alupas.
   ಅಳುಪರ ಭೂದಾನಗಳ ಕುರಿತು ವಿವರಣೆ ನೀಡಿ.

2. Write a note on the spread of Jainism in Karnataka.
   ಕರ್ನಾಟಕದಲ್ಲಿ ಜೈನಧರ್ಮದ ಹರಡುವಿಕೆಯ ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

3. Explain the contributions of Buddhism to ancient Karnataka.
   ಪ್ರಾಚೀನ ಕರ್ನಾಟಕಕ್ಕೆ ಬೌದ್ಧ ಧರ್ಮದ ಕೊಡುಗೆಗಳನ್ನು ವಿವರಿಸಿ.

4. Discuss the status of women in ancient Karnataka with reference to education and administration.
   ಆಡಳಿತ ಮತ್ತು ಶಿಕ್ಷಣಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಪ್ರಾಚೀನ ಕರ್ನಾಟಕದ ಮಹಿಳೆಯರ ಸ್ಥಾನಮಾನಗಳನ್ನು ವಿವರಿಸಿ.

5. Explain the importance of the Shiva (Saiva) temples in coastal Karnataka.
   ಕರಾವಳಿ ಕರ್ನಾಟಕದ ಶೈವ ದೇವಾಲಯಗಳ ಮಹತ್ವವನ್ನು ವಿವರಿಸಿ.

## SECTION - C

**II  Answer the following in 3-5 sentences each.** (5×3=15)

ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ 3-5 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ.

1. Mention the different meanings of the word Tulu.
   ತುಳು ಪದದ ವಿವಿಧ ಅರ್ಥಗಳನ್ನು ಬರೆಯಿರಿ.

2. Write a note on the ancestral worship of Kodavas.
   ಕೊಡವರ ಪೂರ್ವಜರ ಆರಾಧನೆಯ ಬಗ್ಗೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

3. Briefly mention the meaning and definition of caste system
   ಜಾತಿ ವ್ಯವಸ್ಥೆಯ ಅರ್ಥ ಮತ್ತು ವ್ಯಾಖ್ಯೆಗಳನ್ನು ತಿಳಿಸಿ.

4. What is the content of Vaddarse inscription.
   ವಡ್ಡರ್ಸೆ ಶಾಸನದಲ್ಲೇನಿದೆ?

5. Mention the lake temples of coastal Karnataka.
   ಕರಾವಳಿ ಕರ್ನಾಟಕದ ಸರೋವರ ದೇವಾಲಯಗಳ ಬಗ್ಗೆ ತಿಳಿಸಿ.

# St Aloysius College (Autonomous)

## Mangaluru

### B.A. - SEMESTER I – Degree Examination

### December - 2022

### ECONOMICS – OPEN ELECTIVE

### DEVELOPMENT STUDIES

Time: 2½ hrs.    Max Marks: 60

**PART - A/ ವಿಭಾಗ ಎ**

Answer any **FIVE** of the following questions.    (5×2=10)
ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದಾದರೂ **ಐದು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ.

1. What is economic growth?
   ಆರ್ಥಿಕ ಬೆಳವಣಿಗೆ ಎಂದರೇನು?

2. Write any two common characteristics of developing countries
   ಆಭಿವೃದ್ಧಿ ಶೀಲ ಆರ್ಥಿಕತೆಗಳ ಯಾವುದಾದರು ಎರಡು ಲಕ್ಷಣಗಳನ್ನು ಬರೆಯಿರಿ.

3. What is inequality
   ಅಸಮಾನತೆ ಎಂದರೇನು?

4. What is Conflict?
   ಸಂಘರ್ಷ ಎಂದರೇನು?

5. What is HDI
   ಮಾನವ ಅಭಿವೃದ್ಧಿ ಸೂಚಂಕ ಎಂದರೇನು?

6. What is sustainable development?
   ಸುಸ್ಥಿರ ಅಭಿವೃದ್ಧಿ ಎಂದರೇನು?

7. What is Mitigation?
   ವಲಸೆ ಎಂದರೇನು?

8. What is Adaptation?
   ಹೊಂದಿಕೊಳ್ಳುವಿಕೆ ಎಂದರೇನು?

**PART – B/ ವಿಭಾಗ ಬಿ**

Answer any **SIX** of the following questions.    (6×5=30)
ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದಾದರೂ **ಆರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ.

9. Differentiate between economic growth and economic development
   ಆರ್ಥಿಕ ಬೆಳವಣಿಗೆ ಮತ್ತು ಆರ್ಥಿಕ ಅಭಿವೃದ್ಧಿ ನಡುವಿನ ವ್ಯತ್ಯಾಸ ಬರೆಯಿರಿ.

10. Write a note on principles of development ethics.
    ಅಭಿವೃದ್ಧಿ ನೀತಿಯ ತತ್ವಗಳ ಮೇಲೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

11. Write a note on Multidimensional Poverty Index.
    ಬಹುಆಯಾಮದ ಬಡತನದ ಬೆಳವಣಿಯ ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

12. Explain the scope of modern economic growth.
    ಆಧುನಿಕ ಆರ್ಥಿಕ ಬೆಳವಣಿಗೆಯ ವ್ಯಾಪ್ತಿಯನ್ನು ವಿವರಿಸಿ.

13. If the life expectancy at birth of a country is 78 years. If the adult literacy rate of this country is 92, If the combined gross enrolment ratio in this country is 60,the GDP per capita of this country is $8,840 calculate HDI.

ಒಂದು ದೇಶದ ಜನನದ ಸಮಯದಲ್ಲಿ ಜೀವಿತಾವಧಿ 78 ವರ್ಷಗಳು, ವಯಸ್ಕರ ಸಾಕ್ಷರತೆಯ ಪ್ರಮಾಣ 92, ಒಟ್ಟು ದಾಖಲಾತಿ ಅನುಪಾತವು 60, GDP ತಲಾ ಆದಾಯ $8,840 ಆಗಿದಲ್ಲಿ HDIಯನ್ನು ಲೆಕ್ಕಾಚಾರ ಮಾಡಿ.

14. Write a note on economic growth and income distribution.

ಆರ್ಥಿಕ ಬೆಳವಣಿಗೆ ಮತ್ತು ಆದಾಯ ವಿತರಣೆಯ ಬಗ್ಗೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

15. Write a note on Adam Smith's division of labour and accumulation of capital.

ಆಡಂ ಸ್ಮಿತ್ ಶ್ರಮದ ವಿಭಜನೆ ಮತ್ತು ಬಂಡವಾಳದ ಸಂಗ್ರಹಣೆಯ ಬಗ್ಗೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

16. Explain colonial regimes and their legacies.

ವಸಾಹತುಶಾಹಿ ಆಡಳಿತಗಳು ಮತ್ತು ಅವರ ಪರಂಪರೆಗಳನ್ನು ವಿವರಿಸಿ.

17. Explain the causes and impact of climate change.

ಹವಾಮಾನ ಬದಲಾವಣೆಯ ಕಾರಣಗಳು ಮತ್ತು ಪರಿಣಾಮಗಳನ್ನು ವಿವರಿಸಿ.

## PART – C/ ವಿಭಾಗ ಸಿ

**Answer any <u>TWO</u> of the following questions.**                    (2×10=20)

ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದಾದರೂ <u>ಎರಡು</u> ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ.

18. Explain the transition from quantitative to qualitative indices.

ಪರಿಮಾಣಾತ್ಮಕದಿಂದ ಗುಣಾತ್ಮಕ ಸೂಚ್ಯಂಕಗಳಿಗೆ ಪರಿವರ್ತನೆಯನ್ನು ವಿವರಿಸಿ

19. Explain the PQLI as measurement of economic development.

ಆರ್ಥಿಕ ಅಭಿವೃದ್ಧಿಯಲ್ಲಿ PQLIಯನ್ನು ಒಂದು ಆಳತೆಯ ಮಾಪನವಾಗಿ ವಿವರಿಸಿ.

20. Explain Schumpetesr theory of development.

ಶುಂಪಿಟರ್‌ರವರ ಅಭಿವೃದ್ಧಿಯ ಸಿದ್ಧಾಂತವನ್ನು ವಿವರಿಸಿ.

21. Explain the problems and measures of sustainable development.

ಸಮರ್ಥನೀಯ ಅಭಿವೃದ್ಧಿಯ ಸಮಸ್ಯೆಗಳು ಮತ್ತು ಕ್ರಮಗಳನ್ನು ವಿವರಿಸಿ.

**********

G 103 OE 1.1

# St Aloysius College (Autonomous)
## Mangaluru
## B.A. Semester I – Degree Examination
## December - 2022
### POLITICAL SCIENCE  - OPEN ELECTIVE
### INDIAN POLITY: ISSUES AND CONCERNS

Time: 2½ Hours                                                              Max. Marks: 60

**I** Answer **ALL** the following questions in 2 sentences each.        (1x6=6)

ಈ ಕೆಳಗಿನ ಎಲ್ಲಾ ಪ್ರಶ್ನೆಗಳಿಗೆ 2 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿರಿ.

1. What do you mean by National Integration?

   ರಾಷ್ಟ್ರೀಯ ಭಾವೈಕ್ಯತೆ ಎಂದರೇನು?

2. Define Caste.

   ಜಾತಿಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿರಿ.

3. Expand MGNREGA.

   MGNREGA ನ್ನು ವಿಸ್ತರಿಸಿ ಬರೆಯಿರಿ.

4. What is Regionalism?

   ಪ್ರಾದೇಶಿಕ ವಾದ ಎಂದರೇನು ?

5. Expand POTA.

   POTA ನ್ನು ವಿಸ್ತರಿಸಿ ಬರೆಯಿರಿ.

6. Define Corruption.

   ಭ್ರಷ್ಟಾಚಾರವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿರಿ.

**II** Answer any **THREE** of the following questions in 10 sentences        (4x3=12)
each.

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಮೂರು ಪ್ರಶ್ನೆಗಳಿಗೆ 10 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿರಿ.

7. Examine the negative role of Caste System in our life.

   ನಮ್ಮ ಜೀವನದಲ್ಲಿ ಜಾತಿ ಪದ್ಧತಿಯಿಂದಾಗುವ ನಕಾರಾತ್ಮಕ ಪಾತ್ರವನ್ನು ಪರಿಶೀಲಿಸಿ ಬರೆಯಿರಿ.

8. Write a note on Article 25 of the Indian Constitution.

   ಭಾರತದ ಸಂವಿಧಾನದ ವಿಧಿ 25ರ ಬಗ್ಗೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

9. Write a note on TADA.

   TADA ಬಗ್ಗೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

10. What are the measures to control terrorism?

    ಭಯೋತ್ಪಾದನೆಯನ್ನು ನಿಯಂತ್ರಿಸಲು ಬೇಕಾಗುವ ಮಾರ್ಗೋಪಾಯಗಳನ್ನು ವಿವರಿಸಿರಿ.

**III** Answer any **THREE** of the following questions in 20 sentences        (6x3=18)
each.

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಮೂರು ಪ್ರಶ್ನೆಗಳಿಗೆ 20 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿರಿ.

11. Suggest different ways to secure social harmony in India?

    ಸಾಮಾಜಿಕ ಸಾಮರಸ್ಯವನ್ನು ತರುವಲ್ಲಿ ಪೂರಕವಾದ ಮಾರ್ಗೋಪಾಯಗಳನ್ನು ಸೂಚಿಸಿರಿ.

**G 103 OE1.1**

12. Write about the different constitutional provisions towards language.

ಭಾಷೆಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಸಂವಿಧಾನದಲ್ಲಿರುವ ನಿಬಂಧಗಳನ್ನು ಬರೆಯಿರಿ.

13. Examine the challenges related to Inclusive development in India.

ಭಾರತದಲ್ಲಿ ಅಂತರ್ಗತ ಅಭಿವೃದ್ಧಿಗೆ ಸಂಬಂಧಿಸಿದ ಸವಾಲುಗಳನ್ನು ಪರಿಶೀಲಿಸಿ ಬರೆಯಿರಿ.

14. What are the effects of terrorism?

ಭಯೋತ್ಪಾದನೆಯ ಪರಿಣಾಮಗಳನ್ನು ವಿವರಿಸಿರಿ.

**IV Answer any ONE of the following questions in about 30 sentences each.**    (10x1=10)

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಒಂದು ಪ್ರಶ್ನೆಗೆ 30 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿರಿ.

15. Explain the causes of corruption in India.

ಭಾರತದಲ್ಲಿ ಭ್ರಷ್ಟಾಚಾರದ ಕಾರಣಗಳನ್ನು ವಿವರಿಸಿರಿ.

16. Explain different measures to control regionalism in India.

ಭಾರತದಲ್ಲಿ ಪ್ರಾದೇಶಿಕವಾದವನ್ನು ನಿಯಂತ್ರಿಸಲು ಅಗತ್ಯವಿರುವ ವಿವಿಧ ಕ್ರಮಗಳನ್ನು ಸೂಚಿಸಿರಿ.

**V Answer any ONE of the following questions in 40 sentences each.**    (14x1=14)

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಒಂದು ಪ್ರಶ್ನೆಗೆ ನಲ್ವತ್ತು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿರಿ.

17. Explain the role of Religion and Local traditions in India.

ಭಾರತದಲ್ಲಿನ ಧರ್ಮ ಮತ್ತು ಸ್ಥಳೀಯ ಸಂಪ್ರದಾಯಗಳ ಪಾತ್ರವನ್ನು ವಿವರಿಸಿರಿ.

18. Describe different challenges to celebrate Diversity in India.

ಭಾರತದಲ್ಲಿ ವೈವಿಧ್ಯತೆಯನ್ನು ಆಚರಿಸಲು ವಿವಿಧ ಸವಾಲುಗಳನ್ನು ವಿವರಿಸಿರಿ.

**\*\*\*\*\*\*\*\*\*\***

# St Aloysius College (Autonomous)
# Mangaluru
## B.A. Semester I – Degree Examination
### December - 2022
## SOCIOLOGY – OPEN ELECTIVE
## Indian Society: Continuity and Change

Time: 2½ Hours                                          Max. Marks: 60

## PART - A

**Answer any FIVE questions in 2-3 sentences each.**          (5x2=10)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ <u>ಐದು</u> ಪ್ರಶ್ನೆಗಳಿಗೆ 2 –3 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿರಿ.

1. What is social change?

   ಸಾಮಾಜಿಕ ಬದಲಾವಣೆ ಎಂದರೇನು?

2. Write any two characteristics of pre-industrial society.

   ಕೈಗಾರಿಕಾ ಪೂರ್ವ ಸಮಾಜದ ಯಾವುದಾದರೂ ಎರಡು ಗುಣಲಕ್ಷಣಗಳನ್ನು ಬರೆಯಿರಿ.

3. What is nuclear family?

   ವಿಭಕ್ತ ಕುಟುಂಬ ಎಂದರೇನು?

4. Who are the backward classes in India?

   ಭಾರತದಲ್ಲಿ ಹಿಂದುಳಿದ ವರ್ಗ ಎಂದರೆ ಯಾರು?

5. What is a social movement?

   ಸಾಮಾಜಿಕ ಚಳುವಳಿ ಎಂದರೇನು?

6. Expand LGBTQ.

   LGBTQ ಅನ್ನು ವಿಸ್ತರಿಸಿರಿ.

7. Name any one Dalit movement in India.

   ಭಾರತದಲ್ಲಿನ ಯಾವುದಾದರು ಒಂದು ದಲಿತ ಚಳುವಳಿಯನ್ನು ಹೆಸರಿಸಿರಿ.

8. What are social norms?

   ಸಾಮಾಜಿಕ ನಿಯಮಗಳು ಯಾವುವು?

## PART - B

**Answer any SIX of the following:**          (6x5=30)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ <u>ಆರು</u> ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿರಿ.

9. Discuss how modernization has contributed to change in Indian Society.

   ಆಧುನೀಕರಣವು ಭಾರತೀಯ ಸಮಾಜದಲ್ಲಿ ಬದಲಾವಣೆಗೆ ಹೇಗೆ ಕೊಡುಗೆ ನೀಡಿದೆ ಎಂಬುದನ್ನು ಚರ್ಚಿಸಿರಿ.

10. Examine the changing caste structure.

    ಬದಲಾಗುತ್ತಿರುವ ಜಾತಿ ರಚನೆಯನ್ನು ಪರಿಶೀಲಿಸಿರಿ.

11. Elucidate the situation of rural connectivity in India.

    ಭಾರತದಲ್ಲಿ ಗ್ರಾಮೀಣ ಸಂಪರ್ಕದ ಪರಿಸ್ಥಿತಿಯನ್ನು ವಿವರಿಸಿರಿ.

12. Write a short note on the backward class movement in India.

ಭಾರತದಲ್ಲಿ ಹಿಂದುಳಿದ ವರ್ಗಗಳ ಆಂದೋಲನದ ಬಗ್ಗೆ ಕಿರು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

13. Examine the history of LGBTQ movement in India.

ಭಾರತದಲ್ಲಿ LGBTQ ಚಳುವಳಿಯ ಇತಿಹಾಸವನ್ನು ಪರೀಕ್ಷಿಸಿರಿ.

14. Discuss the role of Anna Hazare in the anti-corruption movement.

ಭ್ರಷ್ಟಾಚಾರ ವಿರೋಧಿ ಆಂದೋಲನದಲ್ಲಿ ಅಣ್ಣಾ ಹಜಾರೆಯವರ ಪಾತ್ರವನ್ನು ಚರ್ಚಿಸಿರಿ.

15. Explain the growth of English language in India.

ಭಾರತದಲ್ಲಿ ಆಂಗ್ಲ ಭಾಷೆಯ ಬೆಳವಣಿಗೆಯನ್ನು ವಿವರಿಸಿರಿ.

16. Discuss the modern values of Indian society.

ಭಾರತೀಯ ಸಮಾಜದ ಆಧುನಿಕ ಮೌಲ್ಯಗಳನ್ನು ಚರ್ಚಿಸಿರಿ.

17. Examine the impact of globalization on social norms.

ಸಾಮಾಜಿಕ ನಿಯಮಗಳ ಮೇಲೆ ಜಾಗತೀಕರಣದ ಪ್ರಭಾವವನ್ನು ಪರಿಶೀಲಿಸಿರಿ.

## PART - C

**Answer any TWO of the following:** (2x10=20)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಎರಡು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ.

18. Write an essay on how Indian social institutions are undergoing change.

ಭಾರತೀಯ ಸಾಮಾಜಿಕ ಸಂಸ್ಥೆಗಳು ಹೇಗೆ ಬದಲಾವಣೆಗೆ ಒಳಗಾಗುತ್ತಿವೆ ಎಂಬುದರ ಕುರಿತು ಪ್ರಬಂಧವನ್ನು ಬರೆಯಿರಿ.

19. Write a note on rural healthcare system.

ಗ್ರಾಮೀಣ ಆರೋಗ್ಯ ವ್ಯವಸ್ಥೆಯ ಬಗ್ಗೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

20. Discuss the various women empowerment movements in India.

ಭಾರತದಲ್ಲಿನ ವಿವಿಧ ಮಹಿಳಾ ಸಬಲೀಕರಣ ಚಳುವಳಿಗಳನ್ನು ಚರ್ಚಿಸಿರಿ.

21. Write a note on veganism and impact of globalization on the food habits of modern India.

ಆಧುನಿಕ ಭಾರತದ ಆಹಾರ ಪದ್ಧತಿಯ ಮೇಲೆ ಸಸ್ಯಾಹಾರ ಮತ್ತು ಜಾಗತೀಕರಣದ ಪ್ರಭಾವದ ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

**\*\*\*\*\*\*\*\*\*\***

(2021 Batch onwards)

Reg. No: ☐☐☐☐☐☐☐

## St Aloysius College (Autonomous) Mangaluru

### B.A Semester I– Degree Examination December-2022

## JOURNALISM – (Open Elective)
## WRITING FOR MEDIA

Time: 2 ½ Hours                                         Max. Marks: 60

### Part A

**Answer any FIVE of the following**                    **(5X10=50)**

1. Explain the process of news writing.

   ಸುದ್ದಿ ಬರವಣಿಗೆಯ ಪ್ರಕ್ರಿಯೆಯನ್ನು ವಿವರಿಸಿ.

2. What are the forms of Journalistic writing

   ಪತ್ರಿಕಾ ಬರವಣಿಗೆಯ ವಿಧಗಳು ಯಾವುವು?. ವಿವರಿಸಿ

3. Discuss the inverted pyramid structure with suitable example.

   ತಲೆಕೆಳಗಾದ ಪಿರಮಿಡ್ ಸಂರಚನೆಯನ್ನು ಉದಾಹರಣೆ ಮೂಲಕ ವಿವರಿಸಿ

4. Write a feature story on any travelling spot.

   ಯಾವುವದಾದರೂ ಪ್ರವಾಸಿ ತಾಣದ ಬಗ್ಗೆ ನುಡಿಚಿತ್ರ ಬರೆಯಿರಿ

5. Explain the principles of writing for radio

   ಬಾನುಲಿ ಬರವಣಿಗೆಯ ತತ್ವಗಳನ್ನು ವಿವರಿಸಿ.

6. Write a radio drama script on 'Save our earth'.

   'ನಮ್ಮ ಭೂಮಿಯನ್ನು ಉಳಿಸಿ' ಕುರಿತು ರೇಡಿಯೋ ನಾಟಕವ್ನ್ನು ಬರೆಯಿರಿ

7. Explain the principles and techniques of TV writing.

   ಟಿವಿ ಕಾರ್ಯಕ್ರಮ ಬರವಣಿಗೆಯಲ್ಲಿ ಬಳಸಬೇಕಾದ ತತ್ವ ಮತ್ತು ತಂತ್ರಗಳನ್ನು ವಿವರಿಸಿ.

8. Explain the techniques of writing for new media

   ನವ ಮಾಧ್ಯಮ ಬರವಣಿಗೆಯ ತಂತ್ರಗಳನ್ನು ವಿವರಿಸಿ

### Part B

**Write short notes**                                   **(4X2½ =10)**

1. Face book

   ಫೇಸ್ಬುಕ್

2. Radio Jingle

   ರೇಡಿಯೋ ಜಿಂಗಲ್

3. Press Release

   ಪತ್ರಿಕಾ ಪ್ರಕಟಣೆ

4. Headlines

   ತಲೆಬರಹ

G 107 OE1.1

Reg. No.

**St Aloysius College (Autonomous)**

**Mangaluru**

**B.A. Semester I – Degree Examination**

**December - 2022**

# Kannada Major (Open Elective)

Saranga :Literature and Theatre

Time: 2½ hrs.

Max Marks: 60

I Anwer any three questions in long essay form. 8 X 3 = 24

ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಲ್ಲಿ ಮೂರನ್ನು ಪ್ರಬಂಧ ರೂಪದಲ್ಲಿ ಉತ್ತರಿಸಿ

1. ರಂಗಪ್ರಯೋಗ ಎಂದು ಕರೆಯಲ್ಪಡಲು ಬೇಕಾಗುವ ಮೂಲಭೂತ ಲಕ್ಷಣಗಳನ್ನು ಗುರುತಿಸಿ, ವಿವರಿಸಿರಿ

   Explain the fundamental characteristics of theatre play.

2. ರಂಗಭೂಮಿಯ ಇತಿಹಾಸವನ್ನು ವಿವರಿಸಿರಿ

   Explain the history of theatre.

3. ಕಾಳಿದಾಸನ ನಾಟಕ 'ಅಭಿಜ್ಞಾನ ಶಾಕುಂತಲಂ' ಕುರಿತು ಚರ್ಚಿಸಿ

   Discuss Kalidasa's play Abhijnana Shakunthalam

4. ರಂಗವಿಮರ್ಶೆ ಎಂದರೇನು? ರಂಗ ವಿಮರ್ಶೆ ಒಳಗೊಂಡಿರಬೇಕಾದ ಅಂಶಗಳನ್ನು ಪರಿಚಯಿಸಿ

   What do you mean by Theatre Review? Explain the elements which should be included in the theatre review

5. ಶಿಕ್ಷಣದಲ್ಲಿ ರಂಗಭೂಮಿಯ ಮಹತ್ವವನ್ನು ವಿವರಿಸಿರಿ

   Explain the importance of theatre in education

6. ಸಣ್ಣ ಕಥೆಯನ್ನು ರಂಗಕೃತಿಯನ್ನಾಗಿ ಮಾರ್ಪಡಿಸುವಾಗ ಗಮನದಲ್ಲಿಡಬೇಕಾದ ಅಂಶಗಳನ್ನು ಚರ್ಚಿಸಿ

   Discuss the points to be kept in mind while adapting a short story into a play

II Answer any three questons in short essay form. 4X 3= 12

ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಲ್ಲಿ ಮೂರನ್ನು ಸಂಕ್ಷಿಪ್ತ ರೂಪದಲ್ಲಿ ಉತ್ತರಿಸಿ

7. ಜನಪದ ರಂಗಭೂಮಿಗೂ, ಆಧುನಿಕ ರಂಗಭೂಮಿಗೂ ಇರುವ ವ್ಯತ್ಯಾಸಗಳನ್ನು ವಿವರಿಸಿರಿ

   Explain the difference between folk theatre and modern theatre

8. ನೀವು ನೋಡಿದ ಯಾವುದಾದರೂ ರಂಗಪ್ರದರ್ಶನದ ಕುರಿತು ವಿಮರ್ಶೆಯನ್ನು ಬರೆಯಿರಿ

   Write a review on any theatre performance which you have seen

9. ಕರ್ನಾಟಕದ ಯಾವುದಾದರೂ ಒಂದು ಜನಪದ ರಂಗಭೂಮಿ ಪ್ರಕಾರವನ್ನು ವಿವರಿಸಿರಿ

   Write a note on any one of the folk theatre forms of Karnataka

10. ನೀನಾಸಂ ರಂಗಶಾಲೆಯ ಕಾರ್ಯವ್ಯೆಖರಿಯ ಬಗ್ಗೆ ತಿಳಿಸಿ

    Write about the functioning of Neenasam Theatre Institution

11. 'ಕಾವ್ಯೇಶು ನಾಟಕಂ ರಮ್ಯಂ' ವ್ಯಾಖ್ಯಾನಿಸಿ

    Define and elaborate 'Kavyeshu naatakam ramyam'

12. ನಾಟಕದ ರಂಗತಂತ್ರಗಳ ಕುರಿತು ಬರೆಯಿರಿ

    Explain theatre techniques in a play

III    ಯಾವುದಾದರೂ ಒಂದು ಪದ್ಯವನ್ನು ರಂಗಕೃತಿಯನ್ನಾಗಿಸಲು ಮಾಡಬೇಕಾದ    6 X1= 06
       ಮಾರ್ಪಾಡುಗಳನ್ನು ಹಾಗೂ ರಂಗಾಂಶಗಳನ್ನು ಕುರಿತು ಚರ್ಚಿಸಿ
       Discuss the adaptations and elements needed to make one of the poem into a play

13.    ಪೆಂಟಯ್ಯನ ಅಂಗಿ
       ಇದ್ದಿಲಂಗಡಿ ಕೆಲಸದ ಪೆಂಟಯ್ಯನಿಗೆ
       ಇದ್ದುದು ಒಂದೇ ಒಂದು ಅಂಗಿ.  ಗಿರಾಕಿಗಳ ಮನೆಗೆ
       ಇದ್ದಿಲು ಸಪ್ಲೈ ಮಾಡುವಾಗಲೂ ರಾತ್ರಿ

       ನಿದ್ದೆ ಮಾಡುವಾಗಲೂ, ಪೇಟೆಕಡೆ ಹೋಗುವಾಗಲೂ
       ಇದೇ ಅಂಗಿ. ಮೂಸಿನದಿಯ ಕೊಚ್ಚೆಯಲ್ಲಿ
       ಅದ್ದಿ ತೆಗೆದಂಥ ಬಣ್ಣ, ಇದರಿಂದ

       ಬೇಸರಗೊಂಡ ಪೆಂಟಯ್ಯ ಕಾಸಿಗೆ
       ಕಾಸು ಸೇರಿಸಿ ಖರೀದಿಸಿದ ಅನೇಕದಿನಗಳ ತನ್ನ
       ಆಸೆಯಂತೆ ಒಂದು ಹೊಚ್ಚಹೊಸ ಅಂಗಿ.

       ಎಂದೋ ಹೋಗಬೇಕೆಂದಿದ್ದ ಅಡವಿರಾಮುಡು ಚಿತ್ರಕ್ಕೆ, ಈ ಸಂಜೆಯ
       ಹೋಗಿಬಿಡುವುದು ಎಂದುಕೊಂಡ-ಪೋಲೀಸು ಪಟೇಲನ ಮನೆಗೆ
       ಅರ್ಜೆಂಟಾಗಿ ಬೇಕಾಗಿದ್ದ ಇದ್ದಿಲ ಸಂಗತಿಯನ್ನು ಮರೆತು.

       ಗರಿಗರೀ ಬಿಳಿ ಅಂಗಿ. ಮುಟ್ಟಿದರೆ ಎಲ್ಲಿ
       ಮುರಿಯುತ್ತದೋ, ತೊಟ್ಟರೆ ಎಲ್ಲಿ ಇಸ್ತ್ರಿಯ ಗೆರೆಗಳು
       ಮಾಯುತ್ತವೋ ಎಂದುಕೊಂಡೇ ಹಾಕಿ ಹೊರಟಿದ್ದ.

       ಇದ್ದಿಲಂಗಡಿಗೂ ತನಗೂ ಏನೇನೂ ಸಂಬಂಧವಿಲ್ಲದಂತೆ
       ಇದ್ದಿಲಂಗಡಿಯ ಪಕ್ಕದಲ್ಲೇ ನಡೆದು ಹೋದ. ಇನ್ನೇನು ಗದ್ದೆ-
       ನೆನ್ನುವಷ್ಟರಲ್ಲಿ ಎದುರಾದ್ದು ಮತ್ತಾರು ಅಲ್ಲ ಪೋಲಿಸ್ಪಟೇಲ!

       ಅಂದಿನಿಂದ-ಅಂದಿನಿಂದ ಯಾತಕ್ಕೆ, ಆ ಕ್ಷಣ.
       ದಿಂದ ಪೆಂಟಯ್ಯನ ಬಿಳಿ ಅಂಗಿ
       ಎಂದೂ ಬಿಳಿಯಂಗಿಯಾಗಿರಲಿಲ್ಲ.

       Hey don't give up You are not something like a glass cup
       That you will break so easily
       Tears may be falling from your eyes like it's drizzly But
       you still have in you left some strength
       You are not broken you are just bent
       I know the journey is long It makes you tired
       And I also know that you are very strong
       You have chosen unique goals
       Such goals that when some think of accomplishing them shiver their souls
       You are like a bird
       Don't Give up Poetry in English -English Poem
       Whose wings have been injured
       You must heal and once again fly In the sky
       This time a bit more high The challenges are great But you don't need to be afraid
       Remember your goal is to become the voice of the oppressed
       U'r goal is to help the depressed
       'Your dream is to make your father's dreams come true
       'Your dream is to write a poem that can only be written by a few.

2X2= 04

IV  ಅ) ಕೆಳಗಿನ ಎರಡರ ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ
    **Write short notes for any TWO of the following**

14. ರಂಗಪ್ರಯೋಗದಲ್ಲಿ ತಾಂತ್ರಿಕತೆ   Techanilities of theatre production
15. ಗ್ರೀಕ್ ರಂಗಭೂಮಿ   Greek theatre
16. ರಂಗಾಯಣ   Rangayana
17. ರಾಷ್ಟ್ರೀಯ ರಂಗ ಶಾಲೆ   N.S.D. National School of Drama

2X2= 04

    ಅ) ಕೆಳಗಿನ ಎರಡರ ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ
    **Write short notes for any TWO of the following**

18. ಬಿ.ವಿ. ಕಾರಂತ್ B V Karanth
19. ವಿಲಿಯಂ ಶೇಕ್ಸ್ ಪಿಯರ್   William Shakespeare.
20. ಕೆ.ವಿ. ಸುಬ್ಬಣ್ಣ   K.V. Subbanna
21. ಡಾ. ಚಂದ್ರಶೇಖರ ಕಂಬಾರ   Dr. Chandrashekhar Kambara

1X10=10

V  ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಒಂದೊಂದು ವಾಕ್ಯದಲ್ಲಿ ಉತ್ತರಿಸಿ
   **Answer the following in ONE sentnence each**

22. 'ಕಾವ್ಯ ಕಥಾರಂಗ'ವನ್ನು ನಿರ್ದೇಶಿಸಿದವರು ಯಾರು?

    Who is the director of 'Kavya Katharang' ?

23. ಬಿ.ವಿ. ಕಾರಂತರ ಪೂರ್ಣ ಹೆಸರೇನು?

    What is full name of B V Karanth?

24. ಕುವೆಂಪುರವರು ಬರೆದ ಯಾವುದಾದರೂ ಒಂದು ನಾಟಕದ ಹೆಸರೇನು?

    Name any one of the play written by Kuvempu?

25. ನಾಟ್ಯಶಾಸ್ತ್ರವನ್ನು ಬರೆದವರು ಯಾರು?

    Who is the author of Natyashastra?

26. ಸಂತ ಅಲೋಶಿಯಸ್ ಕಾಲೇಜಿನ ರಂಗತಂಡದ ಹೆಸರೇನು?

    What is the name of St Aloysius theatre group?

27. ಜಿ.ಕೆ. ಮಾಸ್ತರ ಪ್ರಣಯ ಪ್ರಸಂಗ ಬರೆದವರು ಯಾರು?

    Who wrote G.K. Master Pranaya Prasanga?

28. 'ನೀನಾಸಂ' ವಿಸ್ತರಿಸಿ

    Elaborate NEENASAM

29. ರಂಗಾಯಣವನ್ನು ಸ್ಥಾಪಿಸಿದವರು ಯಾರು?

    Who is the Founder of Rangayana?

30. ರಾಷ್ಟ್ರೀಯ ರಂಗ ಶಾಲೆ ಸ್ಥಾಪಿತವಾದ ವರ್ಷ ಯಾವುದು?

    In which year National School of Drama was established?

31. ಕಾಳಿದಾಸ ಬರೆದ ಯಾವುದಾದರೂ ಒಂದು ನಾಟಕದ ಹೆಸರು ಬರೆಯಿರಿ
    Write the name of any play written by Kalidasa

***********

## UNIT I: HISTORICAL INSIGHTS ON DELHI

**I** Answer any TWO of the following in about 250- 300 words each: **(2x15=30)**

1. What was one of the gravest charges against the sultan? Elucidate with examples from the text.

2. Critically analyze Ibn Battuta's, 'The Court of Muhammad Bin Tughlaq', as a travel memoir.

3. How does Ibn Battuta capture the essence of India despite being from another country?

## UNIT II: RELIGION AND TRAVEL IDENTITY

**II** Answer any TWO of the following in about 250 words each: **(2x10=20)**

1. Critically analyse the theme of 'Marriage and Love among middle class women in Delhi as observed by American journalist Elizabeth Bumiller.

2. How does the story of Mahmudain in *Alternative Realities: Love in the Life of Muslim Women* enable Nighat M. Gandhi to gain perspectives on love and life?

3. Comment on the title, 'May You Be the Mother of Hundred Sons' by Elizabeth Bumiller.

## UNIT III: TRAVEL AND ACADEMIC INQUIRY

**III** Answer any TWO of the following in about 100-120 words each: **(2x5=10)**

1. Discuss Globalization and Travel.

2. How does Gender play an important role in Travel?

3. Briefly discuss the genre of travel writing as a vibrant one interspersed with stories, histories, geographies and culture of place.

\*\*\*\*\*\*\*\*

G 109 OE1.1                          Reg. No. ☐☐☐☐☐☐

# St Aloysius College (Autonomous)
# Mangaluru

### B.A. Semester I – Degree Examination
### December - 2022

## Communicative English (Open Elective)
# Introduction to Applied Phonetics

Time: 2½ hrs.                                             Max Marks: 60

**I.   Answer any ONE of the following in about 300 words      (1X10=10)
each:**

1. Write a note on monophthongs, diphthongs and triphthongs with suitable examples.

2. Analyze in detail all the vowel sounds using a vowel quadrilateral.

**II.  Answer any THREE of the following in about 150
words each:                                                 (3X5=15)**

1. Write a note on 'The Five Types of Phonations' with suitable examples.

2. Describe 'The Three Airstream Mechanisms' in detail.

3. Write a note on 'Manner of Articulation' as a criterion for classification of consonants.

4. Elucidate on the role of 'The Position of the Lips' in the classification and description of vowels.

5. Write a note on 'The Weak Forms in English'. Justify with examples.

**III. Transcribe the following from Normal Orthography to   (20x½=10)
IPA.**

| | | |
|---|---|---|
| 1. Always | 11. Female | |
| 2. Amount | 12. Fever | |
| 3. Business | 13. Grass | |
| 4. Busy | 14. Grave | |
| 5. Case | 15. Hobby | |
| 6. Catch | 16. Holiday | |
| 7. Depend | 17. Talk | |
| 8. Destroy | 18. Train | |
| 9. Excited | 19. Writer | |
| 10. Explain | 20. Yesterday | |

IV.    **Convert the following from IPA to Normal    (10x1=10)
       Orthography:**

1. /ægrɪɡeɪt/
2. /ɔːsəm/
3. /kætʃɪŋ/
4. /dɪkriː/
5. /ɪksplauʒn/
6. /frðθ/
7. /ɪntens/
8. /liːtə/
9. /lʌvlɪ/
10. /næʃənl/

V.    **Write the past tense allomorphs for the following:    (5X1=5)**

1. Queen
2. Surprize
3. Birthday
4. Writer
5. Object

VI.   **Write the plural tense allomorphs for the    (5x1=5)
      following:**

1. Dress
2. Forgive
3. Jump
4. Laugh
5. Invite

VII.  **Intonate the following paragraph using stress and    (5 marks)
      intonation pattern:**

Mike and Morris lived in the same village. While Morris owned the largest jewellery shop in the village, Mike was a poor farmer. Both had large families with many sons, daughters-in-law and grandchildren. One fine day, Mike, tired of not being able to feed his family, decided to leave the village and move to the city where he was certain to earn enough to feed everyone. Along with his family, he left the village for the city. At night, they stopped under a large tree. There was a stream running nearby where they could freshen up themselves.

He told his sons to clear the area below the tree, he told his wife to fetch water and he instructed his daughters-in-law to make up the fire and started cutting wood from the tree himself. They didn't know that in the branches of the tree, there was a thief hiding. He watched as Mike's family worked together and also noticed that they had nothing to cook. Mike's wife also thought the same and asked her husband, "Everything is ready but what shall we eat?". Mike raised his hands to heaven and said, "Don't worry. He is watching all of this from above. He will help us."

*******

Reg. No.: ☐☐☐☐☐☐☐

# St Aloysius College (Autonomous) Mangaluru

## B.Com. Semester I– Degree Examination
### December - 2022
### Open Elective
## MANAGERIAL ECONOMICS

Time: 2 ½ hrs.

Max Marks: 60

### SECTION – A

Answer any **FIVE of** the following.

(5x2=10)

1. Write Welfare definition of Economics.

2. Distinguish between Cardinal and Ordinal utility.

3. State Baumol's model.

4. Mention any four determinants of supply.

5. What is Kinked demand curve?

6. What is MRTS?

7. What is price discount and differentials?

### SECTION - B

Answer any **FOUR of** the following.

(4x5=20)

8. Explain the shifts in budget line.

9. Explain the Law of Equi - marginal utility.

10. Explain the relationship of Managerial Economics with Statistics, Accounting and operational research.

11. Explain the properties of Isoquant curve.

12. Explain the determination and uses of Break-even analysis in managerial decisions.

13. Explain the features of Monopolistic competition.

### SECTION – C

Answer any **TWO of** the following.

(2x15=30)

14. Define managerial economics. Explain its nature and objectives.

15. Explain the Law of Diminishing marginal utility.

16. Define Demand forecasting. Explain the methods of demand forecasting and steps involved in it.

\*\*\*\*\*\*

G 340 OE1.1                    Reg. No. :

# St Aloysius College (Autonomous)

# Mangaluru

## Semester I– Degree Examination

## December - 2022

### B.Com. Vocational (Accounting and Tax) – OPEN ELECTIVE

### MANAGERIAL ECONOMICS

Time: 2½ hours                                      Max Marks: 60

## SECTION – A

**Answer any FIVE of the following.**                      (5x2=10)

1. Mention the 2 classifications of Economics.
2. What is Demand?
3. Mention the 3 types of economies.
4. Mention the 4 phases of Business Cycles.
5. Mention the 2 theories of Consumer Behavior.
6. What is Snob Effect?
7. Mention the 3 types of indicators.

## SECTION - B

**Answer any FOUR of the following.**                      (4X5=20)

8. List out the features that discuss the Nature of Business Economics.
9. List out the properties of Indifference Curves.
10. List out the merits of Mixed Economy.
11. Briefly explain the 5 types of demand elasticity with diagrams.
12. Mention the cases where Macro Economics is studied.
13. State the exceptions to the Law of Demand.

## SECTION – C

**Answer any TWO of the following.**                       (2X15=30)

14. Explain the causes of Business Cycles.
15. Differentiate between Increase and Decrease in Supply and Expansion and Contraction of Supply with diagrams.
16. List out the merits as well as demerits of Socialist Economy.

**********

# St Aloysius College (Autonomous)

# Mangaluru

## B.B.A.  Semester I– Degree Examination

## December - 2022

## OPEN ELECTIVE

## BASIC ECONOMICS

Time: 2$^1/_2$ Hours                                                    Max Marks: 60

### PART – A

**Answer any __FIVE__ of the following.**                              (5x2=10)

1.  Mention any four features of Human wants.
2.  What do you mean by Utility?
3.  Draw an Indifference Map.
4.  What do you mean by Demand Forecasting?
5.  Draw a Perfectly Inelastic demand curve.
6.  What are Isoquants?
7.  What is law of supply?
8.  Define the concept of Market Equilibrium.

### PART - B

**Answer any __FOUR__ of the following.**                              (4x5=20)

9.  Briefly explain the concept of consumer surplus with the help of a suitable diagram.
10.  What are the Exceptions to the Law of Demand?
11.  What are the characteristics of labour?
12.  Distinguish between Extension and Contraction of demand.
13.  Briefly explain the Law of Supply.
14.  Distinguish between Cardinal and Ordinal utility.

### PART – C

**Answer any __TWO__ of the following.**                               (2x15=30)

15.  Explain the nature and scope of Economics.
16.  What is indifference curve? Explain the various properties of indifference curve.
17.  Explain the different types of Price Elasticity.
18.  Explain the Law of Diminishing Marginal Utility.

**********

G 501 OE1.1                                        Reg. No. :

# St Aloysius College (Autonomous)

## Mangaluru

### B.Sc. Semester I – Degree Examination

### December - 2022

### PHYSICS – OPEN ELECTIVE

### ELECTRIC CIRCUITS AND WIRING

Time: 2½ hrs.                                                    Max Marks: 60

## SECTION –A

### Answer any **FOUR** of the following.                    (4x2=8)

1. a) What is a Resistor? Give the SI unit of resistance.

    b) What is meant by single phase AC supply?

    c) What is a step down transformer?

    d) What is a diode?

    e) Mention any two DC power sources.

    f) What is a multi-stranded cable?

## SECTION – B

### Answer any **ONE FULL QUESTION** from each unit.        (4x10=40)

### UNIT-I

2. a) Explain the behaviour of A.C. through i) Pure capacitor ii) Pure Inductor   **(6)**

    b) Draw the circuit diagram of a half wave rectifier and give the input and
       output waveforms.                                                           **(4)**

3. a) Draw an A.C. sine wave having Peak value of 20 A and mark the values
       of:
       i) RMS value of current    ii) Average value of current
       iii) Maximum value of current                                              **(6)**

    b) State Kirchhoff's Voltage Law and explain it with the help of a circuit     **(4)**

### UNIT-II

4. a) Describe the construction and working of a DC motor.                        **(6)**

    b) Draw a schematic diagram of an A.C. dynamo and label the parts.            **(4)**

5. a) Draw a schematic diagram of a transformer and explain its working.         **(6)**

    b) How are transformers used in power transmission and electronic
       devices?                                                                    **(4)**

### UNIT-III

6. a) List the different personnel protective equipment used while handling
       electrical appliances.                                                      **(6)**

    b) What is the importance of a fuse in domestic electrical wiring?            **(4)**

7.a)  What is meant by colour coding of wires? How is it helpful?                    **(6)**

  b)  Write a short note on the importance of electrical insulation.                 **(4)**

### UNIT-IV

8.a)  What are the advantages of electrical insulation?                             **(6)**

  b)  Write a short note on electrical consumption of home appliances?              **(4)**

9.a)  What is wire gauge? Why is it needed for electrical wiring?                   **(6)**

  b)  What are the advantages of a LED light over fluorescent lamp and

      filament bulb?                                                               **(4)**

### SECTION –C

**Answer any <u>THREE</u> from the following.**                                    **(3x4=12)**

10.  Two capacitors of 100 μF and 47 μF are connected in parallel. Find the circuit
     current when this combination is connected across a 50 Hz, 230 V power
     supply.

11.  An ideal transformer has 100 turns and 1000 turns in primary and secondary
     windings respectively. If the output voltage is 9 V in the secondary what will
     be the input voltage given at the primary coil?

12.  Three 120 Ω resistors connected in parallel combination is in series with a 10
     KΩ resistor.  Calculate the power dissipated if this combination of resistors is
     connected across a 9V battery.

13.  A sinusoidal voltage v(t)=110 sin ω t is applied across a pure resistor of
     resistance 50 Ω. Find i) current ii) power

                                    **\*\*\*\*\*\*\*\*\***

# St Aloysius College (Autonomous)
## Mangaluru
### B.Sc. Semester I – Degree Examination
### December - 2022
### CHEMISTRY - OPEN ELECTIVE
### CHEMISTRY IN DAILY LIFE

**Max Marks: 60**

Time: 2½ hrs.

Instructions: 1. Write the question number and subdivision clearly.
2. Write equations and diagrams wherever necessary.
3. Answer Part – A in first two pages of the answer book.

## PART - A

**Answer any <u>EIGHT</u> of the following in 1 to 2 sentences.**          (1×8=8)

1. a)  What are the constituents of milk?

   b)  Give the test to identify the presence of vanaspati in milk sample.

   c)  What are food additives?

   d)  Name any two artificial food colourants.

   e)  Give the sources of vitamin D.

   f)  What are oils and fats?

   g)  What is bleaching powder?

   h)  Mention the types of batteries.

   i)  Give any two applications of polymers as plastic in medical field.

## PART - B

**Answer any <u>EIGHT</u> of the following in 3 to 5 sentences.**          (3×8=24)

2. (i)   How do you analyse methyl alcohol in alcoholic beverages?
   (ii)  Explain the role of benzoates as food preservative.
   (iii) What do you mean by food adulteration? Mention any two adulterants added to milk.
   (iv)  Write a short note on food colouring.
   (v)   Mention the deficiency diseases of vitamin A and vitamin B1.
   (vi)  What are the characteristics of polymers?
   (vii) Briefly explain Huble's test.
   (viii) Write any three applications of solar energy.
   (ix)  Explain the action of soap on dirt.

## PART - C

**Answer any <u>SEVEN</u> of the following questions.**          (4×7=28)

3.  Explain the strategy for the development of environment friendly polymers.
4.  Explain the analysis of fat in milk by Gerber method.
5.  How you detect the presence of Rhodamine and Sudan III, IV in spices?
6.  What are the sources of vitamin C, vitamin E and vitamin K?
7.  Explain the principles of primary battery with diagram.
8.  Write any four differences between soaps and detergents.
9.  Explain any two methods of detecting purity of edible oil.
10. Write the procedure for analysis of caffeine in coffee and tea.

*********

**St Aloysius College (Autonomous)**
**Mangalore**
**B.Sc. Semester I - Degree Examination**
December - 2022
## MATHEMATICS (OPEN ELECTIVE)
## MATHEMATICS - I

Time: $2\frac{1}{2}$hrs.                                                    Max Marks: 60

### PART-A

**Answer any NINE of the following:**                              (9x2=18)

1. Find the remainder when $1! + 2! + 3! + \cdots + 100!$ is divided by 12.

2. If $p$ is a prime and $p \mid ab$ then prove that $p \mid a$ or $p \mid b$.

3. Check whether the Diophantine equation $14x + 35y = 93$ can be solved.

4. Find $gcd(143, 227)$.

5. If $A$ is symmetric or skew symmetric then prove that $A^2$ is always symmetric.

6. Show that $A = \begin{bmatrix} cos\alpha & sin\alpha \\ -sin\alpha & cos\alpha \end{bmatrix}$ is an orthogonal matrix.

7. Find the rank of the matrix $\begin{bmatrix} 1 & 2 & 3 \\ 2 & 4 & 7 \\ 3 & 6 & 10 \end{bmatrix}$.

8. Find the characteristic equation of $A = \begin{bmatrix} 1 & 0 \\ 3 & -2 \end{bmatrix}$.

9. Check whether $f(x) = x^3 + 4x^2 + 2$ satisfies the hypothesis of Rolle's theorem on $[1,3]$.

10. Find $\lim_{x\to0} \frac{\sqrt{1+x}-1}{x}$.

11. Determine if intermediate-value theorem holds true for $f(x) = 2 + x - x^2$ on $[0,3]$ for $k = 1$. If the theorem holds, find a number $c$ such that $f(c) = k$.

12. Find 5th degree Maclaurin polynomial for the function $f(x) = \cos x$.

### PART-B
### UNIT I

**Answer any TWO of the following:**                              (2x7=14)

1. A customer bought a dozen pieces of fruit, apples and oranges for $ 1.32. If an apple costs 3 cents more than an orange and more apples than oranges were purchased, how many pieces of each kind were bought?

2.    a) Find all integer solutions of the Diophantine equation
          $172x + 20y = 40$.                                              (5)
      b) Show that 41 divides $2^{20} - 1$.                               (2)

3.    a) Solve the simultaneous congruences $x \equiv 2 \ (mod \ 3)$, $x \equiv 3 \ (mod \ 5)$,
          $x \equiv 2 \ (mod \ 7)$.                                       (5)
      b) Find the $lcm$ of 75 and 125 if their $gcd$ is 25.               (2)

## UNIT II

**Answer any TWO of the following:**                                     (2x7=14)

1.    a) Define a Echelon Matrix.                                         (2)
      b) Find non-trivial solution if exists for $2x + 3y - z + w = 0$
$$3x + 2y - 2z + 2w = 0$$
$$5x - 4z + 4w = 0 \ .$$                                                  (5)

2.    a) Using characteristic equation find the inverse of the matrix
$$A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix} \ .$$   (4)
      b) If $A$ and $B$ are symmetric then prove that $AB + BA$ is symmetric and
         $AB - BA$ is skew symmetric.                                     (3)

3.    a) Express the matrix $\begin{bmatrix} 1 & -1 & 6 \\ 2 & 7 & 3 \\ 8 & -4 & 0 \end{bmatrix}$ as the sum of symmetric and skew
         symmetric matrices.                                             (3)
      b) If $A$ and $B$ are $n$ square skew symmetric matrices then prove that $AB$
         is symmetric if $AB = BA$.                                       (4)

## UNIT III

**Answer any TWO of the following:**                                     (2x7=14)

1.    Find the Taylor polynomial of degree 3 at the number $a$ for the following
      functions:

      a) $f(x) = e^{-x}; a = 0$

      b) $f(x) = x^{\frac{3}{2}}; a = 4$.

2.    Evaluate a) $\lim_{x \to 0} \frac{e^x \sin x - x - x^2}{x^2 + x \log(1-x)}$         b) $\lim_{x \to 0} \frac{e^x - e^{-x} - 2\log(1+x)}{x \sin x}$.

3.    a) Verify Cauchy's mean value theorem for $f(x) = x^2$ and $g(x) = x^4$ in
         the interval $[1, 3]$.                                           (3½)
      b) Find a value of $c$ in $(0,3)$ satisfying the conditions of Rolle's theorem
         for the function $f(x) = x^3 + 4x^2 - 2x + 3$.                   (3½)

****************

# St Aloysius College (Autonomous)
## Mangaluru
### B.Sc. Semester I – Degree Examination
### December - 2022
### COMPUTER SCIENCE (Open Elective)
### OFFICE AUTOMATION

Time: 2½ Hours.                                    Max Marks: 60

## PART –A

1. **Answer any <u>SIX</u> of the following.**                    (6x2=12)

   a) Define Computer Software. Mention the types of Computer Software.

   b) What is File Explorer?

   c) Differentiate Workbook and Worksheet.

   d) What is formula bar in MS-Excel?

   e) Define Internet. List any four internet terms.

   f) Give any four features of Web browser.

   g) Define Database. Give an example.

   h) Define Form in MS Access.

## PART –B
### Answer any <u>ONE</u> <u>FULL</u> question from each unit.          (4x12=48)

### UNIT - I

2. a) Briefly explain Software Terminologies.                    (6)

   b) Explain the various tools available in MS Paint toolbox.    (6)

3. a) Explain MS Office user interface.                          (6)

   b) Briefly explain various steps to insert, edit and delete header and footer in MS Word.          (6)

### UNIT – II

4. a) Explain the various ways to edit a cell in MS-Excel.        (6)

   b) Briefly explain the pivot table creation in MS-Excel.      (6)

5. a) Briefly explain any three mathematical functions in MS-Excel.    (6)

   b) Briefly explain the various formatting of text and numbers in MS-Excel.    (6)

### UNIT – III

6. a) Explain internet applications.                             (6)

   b) Explain MS PowerPoint Environment.                         (6)

7. a) Briefly explain Internet Explorer environment.             (6)

   b) Explain the steps to create Power Point Presentation.      (6)

### UNIT – IV

8. a) Explain MS Access environment.                             (6)

   b) Explain steps to create query in MS-Access.                (6)

9. a) Write the steps to create the Table in MS-Access           (6)

   b) With an example explain how to add primary key to a table.    (6)

*********

G 506 OE1.1       Reg. No. : ☐☐☐☐☐☐☐☐

# St Aloysius College (Autonomous)
## Mangaluru
### B.Sc. Semester I – Degree Examination
### December - 2022
### STATISTICS - OPEN ELECTIVE
### STATISTICAL METHODS

Time: $2\frac{1}{2}$ Hours.            Max Marks: 60

**Note: Normal Distribution Table and Graph sheet will be provided.**

## SECTION - A

I   **Answer any <u>FIVE</u> of the following.**            (5X2=10)

1. Define Population and Sample.

2. Define attribute and variable.

3. What do you mean by Central Tendency? Name the measures of Central Tendency.

4. Find correlation coefficient if $b_{xy} = 1.4167$, $b_{yx} = 0.7010$.

5. State addition theorem of probability.

6. State multiplication theorem of probability.

7. State the pdf of Normal distribution.

## SECTION - B

II   **Answer any <u>ONE</u> question from a and b.**            (4x5=20)

8.a. Explain Simple random sampling and Stratified sampling.

**OR**

8.b. Draw histogram for the following data.

| Rainfall (cms) | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 |
|---|---|---|---|---|---|---|---|
| No.of years | 6 | 8 | 13 | 15 | 11 | 10 | 4 |

9.a. Find Geometric mean and Harmonic mean for the following data.

| Marks | 85 | 90 | 95 | 100 | 105 | 110 | 115 |
|---|---|---|---|---|---|---|---|
| No. of children | 2 | 16 | 33 | 55 | 77 | 95 | 100 |

**OR**

9.b. Find mean deviation from median and its relative measure.

| Percentage marks | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 |
|---|---|---|---|---|---|
| No. of students | 5 | 11 | 21 | 16 | 7 |

10.a. If the number of mistakes made by a typist follows a Poisson distribution with mean 3, what is the probability that he makes two mistakes?

**OR**

10.b. The mean I.Q of a large number of children of age 14 was 100 and variance was 256. Assuming Normal distribution, find what percent of the children had I.Q under 80?

11.a. 12% of the items produced by a machine are defective. What is the probability that out of a random sample of 8 items produced by the machine, 5 are defectives?

**OR**

11.b. The management of a photograph record company has discovered that the number of defects on records appears to follow a Poisson distribution with a mean equal to 0.4. What is the probability that a record selected at random will have three defects?

## SECTION - C

III **Answer any TWO of the following.**                                    (2x15=30)

12.a. The following are the distributions of lives of electric bulbs manufactured by two firms. Compare their means and coefficient of variations and comment on the result.

| Life (hours) | 80-89 | 90-99 | 100-109 | 110-119 | 120-129 |
|---|---|---|---|---|---|
| No. of bulbs (Firm A) | 8 | 11 | 14 | 4 | 3 |
| No. of bulbs (Firm B) | 16 | 14 | 20 | 16 | 4 |

(10)

12.b. Fit an exponential curve of the type $y=ab^x$ for the following data.                (5)

| x | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| y | 8 | 15 | 33 | 65 | 130 |

13.a. Find coefficient of correlation between X and Y.

| X | 21 | 20 | 23 | 25 | 20 | 27 | 28 |
|---|---|---|---|---|---|---|---|
| Y | 12.3 | 12.7 | 12.0 | 12.2 | 12.7 | 12.1 | 12.0 |

(5)

13.b. Obtain the two regression equations for the following data.

| X | 12 | 11 | 15 | 18 | 20 | 27 | 28 |
|---|---|---|---|---|---|---|---|
| Y | 23 | 27 | 28 | 32 | 35 | 33 | 40 |

(10)

14.a. Define probability mass function and probability density function. State their properties.                                                                 (3)

14.b. Find value of 'k' and E(X) for the following data.

| X | -2 | 0 | 2 | 4 | 6 |
|---|---|---|---|---|---|
| P(X=x) | k | 4k | 3k | k | k |

(6)

14.c. From a class of 30 boys and 40 girls, two students are selected at random. Find probability that both students are (i) girls (ii) one girl and one boy.        (6)

**\*\*\*\*\*\*\*\*\*\***

G 507 OE1.1

Reg. No.: ☐ ☐ ☐ ☐ ☐ ☐

# St Aloysius College (Autonomous)
## Mangaluru
### B.Sc. Semester I– Degree Examination
### December - 2022
### BOTANY - OPEN ELECTIVE
### PLANTS FOR HUMAN WELFARE

Time: 2½ Hours.                                   Max Marks: 60

Note: i) Answer all the sections.
   ii) Draw diagrams wherever necessary.

## SECTION –A

**I   Answer any FIVE of the following.**                (5X2=10)

1) List the steps of black tea processing.
2) Mention the fruit type in (i) citrus and (ii) grape.
3) Mention the Botanical name and family of mustard.
4) What are millets? Give any two examples for millets.
5) List out the uses of Neem oil.
6) Mention the family of (i) cardamom (ii) black pepper. List the part used in each.
7) What is the source of jute fiber? Which process is used for extraction of jute?
8) Mention the new varieties of sugar cane. List out the byproducts of sugar cane processing and their uses.

## SECTION – B

**II   Answer any SIX of the following.**                (6x5=30)

1) What is the importance of plant biodiversity? Discuss keeping in mind the need for their conservation.
2) What are essential oils? How is rose oil extracted?
3) Explain the processing of coffee.
4) Describe tapping and processing of rubber.
5) What are legumes? Mention their importance to man and ecosystem.
6) Describe the Mango cultivation process.
7) List the family, parts used and uses of (i) fennel (ii) clove.
8) Describe any one plant you have studied for its therapeutic usage.

## SECTION – C

**III   Answer any TWO of the following.**                (2x10=20)

1) Write a general note on oils and fats.
2) Write a note on green revolution.
3) Write about the importance of forests. Add a note on methods of forest conservation.
4) Explain the concept of Centers of Origin adding a note on Vavilov's work.

**********

G 5080E1.1                    Reg. No.

St Aloysius College (Autonomous)
Mangaluru
B.Sc. Semester I – Degree Examination
December - 2022.
ZOOLOGY (OPEN ELECTIVE)
ECONOMIC ZOOLOGY

Time: 2½ Hours                                      Max. Marks: 60

Note:

1. Answer any **ten** questions from Part –A, any **four** questions from Part- B and any **two** questions from part-C.

2. Draw diagrams wherever necessary.

## PART-A

I.     **Answer any TEN of the following.**                    (2x10=20)

1.  What is reeling with reference to silkworm rearing techniques?
2.  Name any two non-mulberry species of silkworm.
3.  What is meant by Bee pasturage in apiculture?
4.  List any four milk products.
5.  What are broilers? Give two examples.
6.  What is composite fish culture?
7.  What is meant nucleus in pearl culture?
8.  What are the advantages of vermicomposting?
9.  Enumerate the preservation method of prawn.
10. Name the different castes found in honey bees.
11. Name any two exotic forms of earthworms.
12. Give any four uses of Lac.

## PART- B

II.    **Answer any FOUR of the following.**                    (5X4=20)

1.  Briefly explain the life cycle of *Bombyx mori* and write a note on silkworm diseases.
2.  Give an account on disease management in apiculture and enumerate the uses of honey.
3.  Mention the criteria for choosing suitable dairy animals and explain the advantages of dairy farming.
4.  Write a note on Carp culture with respect to construction, maintenance and management of pond.
5.  Describe modern techniques of fish seed production.
6.  Briefly explain the life cycle of Lac insect.

## PART -C

III.   **Answer any TWO of the following.**                    (10X2=20)

1.  Give an account on indigenous method of bee keeping.
2.  With reference to dairy, explain loose housing system and conventional barn system.
3.  Write explanatory notes on poultry diseases and control measures.
4.  Describe the habit categories of earthworms.

***********

# St Aloysius College (Autonomous)
## Mangaluru
### B.Sc. Semester I – Degree Examination
### December - 2022
### BIOCHEMISTRY - OPEN ELECTIVE
### BIOCHEMISTRY OF CELL

Time: 2½ Hours             Max. Marks: 60

Note: i) Answer all the questions
      ii) Draw diagrams wherever necessary

## PART – A

1. **Answer any TEN of the following.**           (2×10=20)

a) Define carbohydrate.

b) Write the difference between homo and heteropolysaccharides.

c) What is nucleotide and nucleoside?

d) What are non-reducing sugars? Give example.

e) What are Sphingolipid's?

f) Define peptide bonds.

g) Write the difference between prokaryotes and eukaryotes.

h) Write the structure of tyrosine and tryptophan.

i) What are vitamins? Give example.

j) Write the role of Mg as a co-factor

k) Vitamin C and D is also called as?

l) Give example of lipid molecule which act as signal molecule.

## PART – B

**Answer any EIGHT of the following.**           (5X8=40)

2. Classify the amino acids based on polarity.

3. Write a note on Glutathione.

4. Classify the carbohydrates with suitable example.

5. Explain structure and functions of types of RNA.

6. Explain the clinical significance of thiamine, riboflavin and biotin

7. Write a note on membrane lipids.

8. Explain structure and functions of any two lipid soluble vitamins.

9. What is the significance of metal ions in heme and cyanocobalamin?

10. Write a note on major classes of biomolecules.

11. Explain the role of coenzymes in biological system.

**\*\*\*\*\*\*\*\*\***

G 601 OE1.1                                    Reg. No. ☐☐☐☐☐☐

# St Aloysius College (Autonomous)
## Mangaluru
### B.C.A.  Semester I – Degree Examination
### December - 2022
### B.C.A. - OPEN ELECTIVE
## BUSINESS STATISTICS

Time: 2 ½hrs.                                                        Max Marks: 60

### PART – A
**Answer any SIX of the following.**                              (6x2=12)

1. a) Explain cross sectional data with an example.
   b) If A.M=20 and Median=30 then what is the mode of the distribution?
   c) Mention five important measures of Central Tendency.
   d) Write formula to find mode of continuous frequency.
   e) What do you mean by Price Relative? How do you obtain it?
   f) Suppose $P_{01}(Las)=120$ and $P_{01}(Pas)=140$ then obtain Fishers Price Index Number.
   g) Give an example for a seasonal variation and irregular variation in Time series.
   h) Write down normal equations for fitting trend.

### PART – B
**Answer any ONE FULL question from each unit.**                  (12x4=48)

### UNIT – I

2. a) The following table gives the distribution of inventory to sales ratio of **(6)** 210 retail outlets. Estimate Arithmetic Mean and Median Value.

| Inv to sales ratio | 1-2 | 2-3 | 3-4 | 4-5 | 5-6 | 6-7 | 7-8 | 8-9 |
|---|---|---|---|---|---|---|---|---|
| No of outlets | 20 | 30 | 60 | 40 | 30 | 15 | 10 | 5 |

   b) Suppose that samples of polythene bags from two manufacturers A and **(6)** B are tested by a buyer for bursting pressure giving the following results

| Bursting Pressure of bags of firm A | 18 | 19 | 20 | 25 | 26 | 12 | 35 | 11 | 16 |
|---|---|---|---|---|---|---|---|---|---|
| Bursting Pressure of bags of firm B | 16 | 47 | 49 | 06 | 53 | 25 | 04 | 14 | 38 |

   a) Which set of Bags has the highest bursting pressure on an average?
   b) Which has more consistent pressure?

### OR

3. a) A survey was conducted to determine the age (in years) of 120 **(6)** automobiles. The result of which is as follows

| Age of Auto | 0-4 | 4-8 | 8-12 | 12-16 | 16-20 |
|---|---|---|---|---|---|
| No of Autos | 15 | 25 | 50 | 22 | 8 |

Find a) $Q_1$ and $Q_3$        b) $P_{60}$

b) Data of rejected items during production process are as follows. **(6)** Calculate mean, Standard Deviation.

| No of rejects | 23 | 28 | 33 | 38 | 43 | 48 | 53 |
|---|---|---|---|---|---|---|---|
| No of operators | 5 | 15 | 28 | 42 | 15 | 12 | 3 |

## UNIT – II

4. a) In how many years would ₹800 deposited in a bank amount to ₹1,327.61 at 13.5% simple interest per annum? **(4)**

b) What principal invested today will amount to ₹3,260 in 4 years at 13% per annum compound interest? **(4)**

c) A balance of ₹4,520 in an account with a bank amounted to ₹ 5,604.80 in 4 years. Find the rate of SI at which the amount grew. If at the same rate of interest is compounded annually, what would be the amount? **(4)**

**OR**

5. a) The simple interest on ₹600 for 9 month is ₹27. Find the interest rate. **(4)**

b) What is the rate of CI at which a sum doubles in 5 years? **(4)**

c) In how many years will deposited amount triple itself at 8.5% C.I. p.a.? **(4)**

## UNIT – III

6. a) What is an index number? Explain different types of index number with method of construction. **(4)**

b) For the following data calculate a price index number using Arithmetic **(4)** Mean and Geometric Mean of Price relatives.

| Year | Commodity | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| Base Year | 45 | 60 | 20 | 50 | 85 | 120 |
| Current Year | 55 | 70 | 30 | 75 | 90 | 130 |

c) Compute Bowley's and Marshall Edgeworths Price Index Numbers from **(4)** the following data.

| Commodity | 2019 | | 2020 | |
|---|---|---|---|---|
| | Price | Quantity | Price | Quantity |
| A | 20 | 8 | 40 | 6 |
| B | 50 | 10 | 60 | 5 |
| C | 40 | 15 | 50 | 15 |
| D | 50 | 20 | 20 | 25 |

**OR**

7. a) Calculate
   i. Laspeyre's Index Number   ii) Paasche's Index Number **(8)**
   iii) Fisher's Index Number

| Item | Price | | Quantity | |
|---|---|---|---|---|
| | Base year | Current year | Base year | Current year |
| Rice | 400 | 850 | 100 | 120 |
| Wheat | 320 | 690 | 20 | 60 |
| Sugar | 720 | 1600 | 10 | 10 |
| Dhal | 720 | 2100 | 10 | 20 |

b) Compute the cost of living index number by aggregative expenditure (4) method.

| Commodity | Base Year | | Current Year |
|---|---|---|---|
| | Price (₹) | Expenditure (₹) | Price (₹) |
| Rice | 200 | 1000 | 900 |
| Sugar | 300 | 300 | 1500 |
| Soap | 15 | 45 | 30 |
| Kerosene | 140 | 140 | 420 |
| Rent | 50 | 600 | 300 |
| Misc | 50 | 600 | 400 |

**UNIT – IV**

8. a) Briefly explain different components of time series. (4)

b) Estimate trend values using the data given by taking a four year (4) moving average.

| Year | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|
| Value | 12 | 25 | 39 | 54 | 70 | 87 | 82 | 65 | 49 |

c) Fit a linear trend by least square method that describes trend in the (4) production of steel (in metric tonnes) represented by the time series as given below. Estimate production for the year 2014.

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|
| Production of steel | 60 | 72 | 75 | 65 | 80 | 85 | 95 | 70 |

**OR**

9. a) Distinguish between seasonal variation and cyclical variation in time (4) series.

b) Fit a trend by the method of least squares that describes trend in the (8) earnings (₹ In lakh) represented by the time series as given below. Estimate the earnings for the year 2019.

| Year | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|
| Earnings | 38 | 40 | 65 | 72 | 69 | 60 | 87 |

**\*\*\*\*\*\*\*\*\*\***