

**B.Sc. Mathematics**

**First Semester**

**Assignment Questions**

**Course Code:MM1141**

**Methods Of Mathematics**

1. If  $a$  and  $b$  are two natural numbers such that  $(a, b)=6$ ,  $[a, b] = 36$ . What can  $a$  and  $b$ ?
2. Solve  $12x \equiv 5(mod 47)$ .
3. Describe the domain and range of the function  $y = x\sqrt{9 - x^2}$ .
4. Let  $f(x) = x^2 + 3$ ,  $g(x) = \sqrt{x}$ .  
Find 1)  $(f \circ g)(x)$   
2)  $(g \circ f)(x)$  and state their domains.
5. Find the slope intercept form of the equation of the line with the conditions that the line is perpendicular to  $y=5x+9$  and  $y$ - intercept = 6.
6. Find all the points of discontinuity of the function  $f$  defined by
$$f(x) = \begin{cases} x + 2 & \text{if } x < 1 \\ 0 & \text{if } x = 1 \\ x - 2 & \text{if } x > 1 \end{cases}$$
7. Let  $f(x) = \begin{cases} x^2 \sin \frac{1}{x} & x \neq 0 \\ 0 & x = 0 \end{cases}$ 
  - a) Show that  $f$  is continuous at  $x = 0$
  - b) Find  $f'(0)$
  - c) Find  $f'(x)$ , for  $x \neq 0$
  - d) Show that  $f$  is not continuous at  $x=0$
8. Use implicit differentiation to find  $\frac{d^2y}{dx^2}$  if  $4x^2 - 2y^2 = 9$
9. If  $f(x) = x^2 - 5x + 6$ . Then find
  - a) The intervals on which  $f$  is increasing
  - b) The interval on which  $f$  is decreasing
  - c) The open intervals on which  $f$  is concave up
  - d) The open intervals on which  $f$  is concave down
  - e) The  $x$  co ordinate of all inflection points
10. Generate or sketch of graph  $y = 6x^{\frac{1}{3}} + 3y^{\frac{4}{3}}$  and analyse it

## **FUNDAMENTALS OF FINANCIAL ACCOUNTING**

**Course Code : CO1131**

### **QUESTIONS**

1. Journalise the following transactions

2021 march 1: Admin started business with Rs.10,000

- „ 2: Purchase furniture for cash Rs.2,000
- „ 3: Purchased good for cash Rs. 4,500
- „ 4: Purchase goods from John on credit Rs. 6,000
- „ 5: Sold goods for cash Rs.5,000
- „ 6: Sold goods to Jose on credit Rs.6,000
- „ 9 : Paid for stationery Rs. 200
- „ 11: Paid for advertisement Rs.3,000
- „ 15: Sold goods Rs.2,400
- „ 21: Purchase goods Rs.1,100
- „ 28: Paid John Rs.3,000
- „ 29: Received from Jose Rs.4,500
- „ 30: Paid Rent Rs.300
- „ 30: Paid salary Rs. 400
- „ 31: Received commission Rs.200
- „ 31: Withdrew for domestic use Rs.300

2. Explain accounting concepts and conventions.

3. Enter the following transactions in the Double column Cash Book of Tarun

2021

Rs.

March 1	Opening Balance	
	Cash in hand	300
	Cash at bank	3,200
2	Sold goods for Cash	4000
4	Purchased goods for cash	3,000
6	Deposited cash into bank	800
8	Withdrew cash from bank	1,400
12	Purchased stationery	300
15	Paid to Sanjay by cheque	4,600
18	Rent paid by cheque	900
21	Received cheque from Suraj	2,000
22	The cheque from Suraj paid into bank	2,000
25	Drew cash for domestic purpose	400
28	Salary paid by cheque	1200
31	Cash Sales	4,100
	Paid into bank	4000

4. What is Trial Balance? Explain the objectives and preparation of Trial balance.

### STATISTICS ASSIGNMENT QUESTIONS

**Course Code: ST1131.1**

1. Calculate the median of the distribution of marks obtained by 80 students given below.

Marks: 0-10 10-20 20-30 30-40 40-50 50-60 .

Frequency: 3 9 15 30 18 5.

2. Calculate the geometric mean of the following observations:

2574, 475, 75, 5, 0.8, 0.08, 0.005, 0.009.

3. The following table contains the daily wages in rupees of 21 workers.  
Construct a frequency table with class interval 2.

4. Find the standard deviation of the following observations by the direct method and the shortcut method.

20, 25, 35, 40, 15, 10

5. The first four moments of a distribution about the value “5” of a variable are 2, 20, 40, 50. Obtain the mean, second, third and fourth central moments.
  6. For a group of 10 items  $\sum x = 452$ ,  $\sum x^2 = 242$  and mode=43.  
  
Find the Pearson co-efficient of skewness.
  7. Define random experiment, sample space, sample point and event.
  8. A fair dice is thrown. What is the probability of getting any face less than 5?
  9. If A, B and C are pairwise independent and “A” is independent of B  $\cup$  C. Show that A, B, C are mutually independent.
  10. State and prove Bayes theorem.
-

ASSIGNMENT & CASE ANALYSIS

SEMESTER 1

ML.1111.1

അഡീഷണൽ ലാംഗ്വേജ് I

ASSIGNMENT

- കഥാരസാശാൻ, ഉള്ളൂർ, വള്ളത്തോൾ എന്നിവരുടെ ഖണ്ഡകാവ്യങ്ങളെ പരിചയപ്പെടുത്തുക.  
അല്ലെങ്കിൽ
- മലയാള കവിതാസാഹിത്യചരിത്രം സംക്ഷേപിക്കുക.

CASE ANALYSIS

- പ്രാചീന കവിത്രയത്തിന്റെ സംഭാവനകൾ വിലയിരുത്തുക.  
അല്ലെങ്കിൽ
- സമകാലിക മലയാളകവിതയുടെ സവിശേഷതകൾ വിലയിരുത്തുക.

## **Additional Language HINDI**

### **TOPICS FOR ASSIGNMENT AND CASE ANALYSIS**

**Maximum marks: 20**

**Assignment: 10, Case analysis :10**

**First Semester HN 1111.1 Course I – Prose and One Act Plays**

#### **ASSIGNMENT TOPICS**

हिंदी गद्य के विभिन्न विधाओं का परिचय दीजिए ।

या

कहानीकार प्रेमचंद का परिचय देकर मन्त्र कहानी की आलोचना कीजिए ।

#### **CASE ANALYSIS**

एकांकी कला की दृष्टि से 'अंडे के छिलके' 'एकांकी की समीक्षा कीजिए ।

या

'बहु की विदा' 'एकांकी का सारांश लिखकर उसकी विशेषताओं पर प्रकाश डालिए।

\*\*\*

**First Degree Programme in English Language and Literature**

**SEMESTER – I**

**TOPICS FOR ASSIGNMENT AND CASE ANALYSIS**

**Language Course 1 LISTENING, SPEAKING AND READING**

**Common for B.A/BSc [EN 1111.1]**

**Assignment (8 to 10 pages)**

Write an essay on the organs of speech and speech mechanism.

Or

Analyse the relevance of the title of the play *The Brink of Silence* (10 marks)

**Case Analysis (5 pages)**

Explain the Sub-skills of Reading. (10 marks)

**Foundation Course 1 Perspectives on Contemporary Issues: EN 1121**

**Common for all BA/BSc Programmes**

**Assignment (8 to 10 pages)**

Comment on the significance of the title “Goddess of Revenge”.

Or

Discuss Gail Omvedt’s perspective on violence against women in India (10marks)

**Case Analysis (5 pages)**

Analyse the impacts of alcoholism in the contemporary society. (10marks)