

**UNIVERSITY OF KERALA**  
**SCHOOL OF DISTANCE EDUCATION**  
**Third Semester BSc Mathematics -2020 Admission**

**Assignment Questions**

**MATHEMATICS COURSE CODE :MM1341**

1. Prove that
  - i) Every  $a$  in  $G$  has an order .
  - ii) If  $d$  is the order of  $a$  , then  $a^{rd} = e$  for any number  $r$  ; if  $m$  is any number with  $a^m = e$  , then  $d$  divides  $m$ .
  - iii) The order of  $a$  divides  $g$  ,the number of elements of  $G$ .
  - iv) If  $d$  is the order of  $a$  , then  $a^r$  has order  $\frac{d}{(r,d)}$  , where  $(r,d)$  is the g.c.d of  $r$  and  $d$ .
2. By Chinese Remainder theorem solve
$$x = 7(mod 11) , x = (6 mod 15), x = 10(mod 15)$$
3. Find the curvature and radius of curvature for  $\overline{r}(t) = 3cost i + 4sintj + tk$  at  $t = \pi/2$ .
4. Find the arc length parametrization of the cycloid
$$x = at - asint, y = a - acost ( 0 \leq t \leq 2\pi)$$
5. Find parametric equations for the line whose vector equation is given by
  - a)  $xi + yj + zk = k + t(i - j + k)$
  - b)  $\langle x, y, z \rangle = \langle -1, 0, 2 \rangle + \langle -1, 3, 0 \rangle$
6. Find a point  $P$  on the line and a vector  $\overline{v}$  parallel to the line by inspection
$$xi + yj + zk = (i + j - 2k) + tj$$
7. Find exponent of  $U_8$  ,  $U_9$  ,  $U_{10}$ .

8. Solve the system if possible

$$x \equiv a_1(\text{mod } m_1); x \equiv a_2(\text{mod } m_2); x \equiv a_3(\text{mod } m_3)$$

where  $(a_1, a_2, a_3) = (2, 3, 5)$  and  $(m_1, m_2, m_3) = (2, 3, 5)$ .

### **COST ACCOUNTING COURSE CODE :CO-1331.1**

1. What do you mean by cost control? Differentiate cost control and cost reduction.
2. What are the objectives of cost accounting ? Differentiate Financial Accounting and Cost Accounting.
3. What do you mean by labour cost? Explain different types of way payment system and their merits and demerits.
4. What do you mean by overheads? What are the types of overheads?
5. Prepare statement showing the pricing of issues on the basis of i) FIFO method ii) LIFO method

Date	Particulars	Qty	Rate/unit
April 1	Opening balance	100	5
„	Received	200	5
„5	Received	30	6
„8	Issued	120	-
„10	Received	20	7
„12	Issued	100	-
„23	Received	30	6
„30	Issued	20	-

## Statistics

course code :ST 1331.1

1. Five unbiased dice are tossed. Find the probability that atmost two of them will 6
2. 1000 candidates in an examination were grouped into 3 classes I, II, and III. In descending order. The number in the first and second classes were 50 and 350 respectively . The boundaries of the II classes are 90 and 50 respectively. Assuming the distribution to be Normal . Find its mean and Standard Deviation.
3. Fit a Binomial and Poisson Distribution to the following data and compare the theoretical frequencies  
X : 0    1    2    3    4  
F : 30   62   46   10   2
4. Find h such that  $P\{|x - 5| < h\} \geq 0.99$
5. Two random samples of sizes 25 and 30 were taken from the first year students of a university and their heights are measured . What is the value of  $\alpha$  so that  $P\left\{\frac{s^2_1}{s^2_2} \geq \alpha\right\} \leq 0.05$

**TOPICS FOR ASSIGNMENT AND CASE ANALYSIS:  
ENGLISH COURSES FOR BA/BSc/BCom STUDENTS**

**SEMESTER - 3  
WRITING AND PRESENTATION SKILLS  
EN 1311.1 Language Course VI (BA/ BSc English IV)  
&  
EN 1311.2: Language Course V (BCom)**

**ASSIGNMENT (eight to ten pages)**

1. Write an essay on the Mechanics of Writing.  
Or

2. The process of writing from creating an outline to preparing a final draft.

(10 marks)

**CASE ANALYSIS (five pages)**

1. What are the features of a paragraph?

Or

2. Create the content for a 15 to 20 slides on the topic 'Climate Change'.

Or

3. Prepare a cover letter (job application letter) and a resume for the post of a teacher in a school.

(10 marks)

# BA & B Sc. ADDITIONAL LANGUAGE MALAYALAM

## SEMESTER 3

ML 1311

ദൃശ്യ കലാസാഹിത്യം

### ASSIGNMENT

- കഞ്ചൻ നമ്പ്യാർ കൃതികളുടെ സവിശേഷതകൾ വിശദമാക്കുക

### CASE ANALYSIS

- കഥകളി ചടങ്ങുകൾ എന്തെല്ലാം ?

**ADDITIONAL LANGUAGE HINDI FOR BA/BSc 2020 ADMISSION**

**ASSIGNMENT CASE ANALYSIS TOPIC**

**ASSIGNMENT MAXIMUM MARKS-10**

**CASE ANALYSIS MAXIMUM MARKS-10**

**V-HN-1311.1-POETRY AND GRAMMAR**

**भक्तिकालीन कवि कबीरदास पर विचार कीजिए ।**

**या**

**तुलसीदास के प्रमुख रचनाओं पर प्रकाश डालिए ।**

**CASE ANALYSIS**

**संज्ञा क्या है? संज्ञा के विभिन्न प्रकारों पर सोदाहरण विचार कीजिए ।**

**या**

**‘एक यात्रा के दौरान’ लंबी कविता के बारे में विचार कीजिए।**