

Third semester B.Sc. Mathematics

Assignment Questions

(2023 admission)

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
$$x \equiv 7 \pmod{11}, x \equiv 6 \pmod{15}, x \equiv 10 \pmod{15}$$
3. Find the curvature and radius of curvature for $\vec{r}(t) = 3\cos t \mathbf{i} + 4\sin t \mathbf{j} + t \mathbf{k}$ 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) $x\mathbf{i} + y\mathbf{j} + z\mathbf{k} = \mathbf{k} + t(\mathbf{i} - \mathbf{j} + \mathbf{k})$
 - 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 \vec{v} parallel to the line by inspection
$$x\mathbf{i} + y\mathbf{j} + z\mathbf{k} = (i + j - 2k) + tj$$
7. Find exponent of U_8, U_9, U_{10} .
8. Solve the system if possible
$$x \equiv a_1 \pmod{m_1}; x \equiv a_2 \pmod{m_2}; x \equiv a_3 \pmod{m_3}$$
where $(a_1, a_2, a_3) = (2, 3, 5)$ and (m_1, m_2, m_3) .

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 wage 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

- Five unbiased dice are tossed. Find the probability that at most two of them will show 6.
- 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 class are 90 and 50 respectively. Assuming the distribution to be Normal. Find its mean and Standard Deviation.
- 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
- Find h such that $P\{|x - 5| < h\} \geq 0.99$
- 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 α so that $P\left\{\frac{s_1^2}{s_2^2} \geq \alpha\right\} \leq 0.05$

**TOPICS FOR ASSIGNMENT AND CASE ANALYSIS: ENGLISH
COURSES FOR B.A./B.Sc./B.Com. STUDENTS**

SEMESTER-3

WRITING AND PRESENTATION SKILLS

EN1311.1 Language Course VI (B.A./B.Sc. English IV) &

EN 1311.2: Language Course V (B.Com)

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)

ADDITIONAL LANGUAGE HINDI

ASSIGNMENT & CASE ANALYSIS TOPICS

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।

ബി.എ/ ബി.എസ്.സി
അഡ്മിഷണൽ ലാംഗ്വേജ് മലയാളം
2023 അഡ്മിഷൻ

SEMESTER 3

ML 1311.1

ദൃശ്യകലാസാഹിത്യം (ദൃശ്യസാഹിതി)

ASSIGNMENT

- കേരളീയ ദൃശ്യകലകളെ പരിചയപ്പെടുത്തുക
അല്ലെങ്കിൽ
- തുള്ളൽ സാഹിത്യവും കൂഞ്ചൻനമ്പ്യാരും

CASE ANALYSIS

- മലയാളനാടകചരിത്രം വിലയിരുത്തുക
അല്ലെങ്കിൽ
- മലയാള സിനിമാചരിത്രം അവലോകനം ചെയ്യുക