5E1357

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B. Tech. V - Sem. (Main / Back) Exam., Feb.-March - 2021

Computer Science & Engineering

5CS5 – 12 Human-Computer Interaction

Time: 2 Hours **Maximum Marks: 65**

Min. Passing Marks: 23

Instructions to Candidates:

Attempt all five questions from Part A, four questions out of six questions from Part B and one questions out of three from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

PART – A

(Answer should be given up to 25 words only) [5×2=10]

All questions are compulsory

Q.1 What is scope & outcome of Human Computer Interaction?

Q.2 Explain research question formulation Techniques.

Q.3 Explain Hick – Hyman's law with example.

Q.4 How you can collect requirements from contextual inquiry?

Q.5 What is HTA? Draw different notations is HTA.

PART – B

(Analytical/Problem solving questions) **[4×10=40]**

Attempt any four questions

Q.1 What is usability? What do you mean by 5 E's in usability? Explain Eight Golden Rules.

Q.2 Explain Gulf of Model. What do you mean by Gulf of Evaluation and Gulf of Execution?

Q.3 How can you state HCI is important for designing a software? Explain Prototyping Techniques.

Q.4 What do you mean by Concur Task Tree (CTT)?

Q.5 Explain OOP and OOM of user Interface design?

Q.6 What do you mean by GOMS? Which models one present in GOMS family? Explain them.

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions) **[1×15=15]**

Attempt any one questions

Q.1 How could you conduct a Heuristics Analysis for GOOGLE MAPS in Google Earth? You should consider evaluator as Expert user. Assume parameters if any required.

Q.2 What are different methods for analysis of Empirical data?

Suppose you have designed a new text entry technique for phones. Multi – Tap & T9 techniques are already present but you think your new method is better than other techniques. You decide to under-take some empirical research to evaluate your invention and to compare it with the current techniques? [Assume $F(2, 9) = 4.26$]

Participants	New Method	Multi – tap	T9
1	3	5	7
2	2	2	4
3	1	4	5
4	1	2	3

Q.3 How GUI is used to design system interactive? What are requirements for GUI? Explain Aesthetics for Graphics.
