Indian Institute of Technology, Madras - Centre for Continuing Education

**Notations :**

1.Options shown in green color and with icon are correct.

2.Options shown in red color and with icon are incorrect.

**Question Paper Name :**IIT M DAD DIPLOMA AN2 EXAM QPD1 20 Nov 2022

**Subject Name :**2022 Nov: IIT M DAD DIPLOMA AN2 EXAM QPD1

**Creation Date :** 2022-11-16 14:49:23 **Duration :** 135

**Total Marks :** 721

**Display Marks:** Yes

**Share Answer Key With Delivery Engine :** Yes

**Actual Answer Key :** Yes

**Calculator :** Scientific

**Magnifying Glass Required? :** No

**Ruler Required? :** No

**Eraser Required? :** No

**Scratch Pad Required? :** No

**Rough Sketch/Notepad Required? :** No

**Protractor Required? :** No

**Show Watermark on Console? :** Yes

**Highlighter :** No

**Auto Save on Console?** Yes

**Change Font Color :** No

**Change Background Color :** No **Change Theme :** No **Help Button :** No **Show Reports :** No **Show Progress Bar :** No

**Group I**

**Group Number :** 1 **Group Id :** 64065310798 **Group Maximum Duration :** 0 **Group Minimum Duration :** 90 **Show Attended Group? :** No **Edit Attended Group? :** No **Break time :** 0 **Group Marks :** 721 **Is this Group for Examiner? :** No **Examiner permission :** Cant View **Show Progress Bar? :** No **Revisit allowed for group Instructions? :** Yes **Maximum Instruction Time :** 0 **Minimum Instruction Time :** 0 **Group Time In :** Minutes **Navigate To Group Summary From Last Question? :** No **Disable Submit Button During Assessment? :** No **Section Selection Time? :** 0 **No of Optional sections to be attempted :** 0

**Programme Feedback**

**Section Id :** 64065328975

**Section Number :** 1

**Section type :** Online

**Mandatory or Optional :** Mandatory

**Number of Questions :** 33

**Number of Questions to be attempted :** 33

**Section Marks :** 20

**Display Number Panel :** Yes

**Group All Questions :** No

**Enable Mark as Answered Mark for Review and**

**Clear Response :**Yes

**Maximum Instruction Time :** 0

**Sub-Section Number :** 1

**Sub-Section Id :** 64065363278

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Number : 1 Question Id : 640653445429 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

"Dear Students,

The B.S. Degree in Programming and Data Science is a unique initiative where we have attempted to provide access to quality learning content along with flexibility to a larger group of learners. This also means that there will be diverse approaches to learning and engagement within the programme. While we know some of the most common paths taken, the programme would greatly benefit if we are able to understand the spectrum of approaches that students are adopting while taking up courses. To gather this input, we are kindly requesting you to spend 10 minutes of your time to provide us with your learning and engagement feedback in the programme.

To compensate for the time that you spent in providing feedback, the following incentives will be provided from our side:

1. 15 minutes of extra time will be allotted to all students who are doing less than 4 courses. 2. Max of 5 marks will be provided as moderation to the student who filled this survey, if they are found short of minimum marks required for passing the course(s) in this term.

Kindly ensure that you provide an honest feedback to all the questions as your inputs will be pivotal in any policy change that we bring in the programme in the subsequent terms."

Are you doing this programme along with either a full-time or part-time job? **Options :**

6406531484269. YES

6406531484270. NO

**Question Number : 2 Question Id : 640653445430 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you doing this programme along with either another full-time or part-time degree programme?

**Options :**

6406531484271. YES

6406531484272. NO

**Question Number : 3 Question Id : 640653445431 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

How much time are you able to spend in a week for studying in the programme?

**Options :**

6406531484273. <20 hours

6406531484274. 20 - 30 hrs

6406531484275. 30 - 40 hrs

6406531484276. 40 - 50 hrs

6406531484277. 50 - 60 hrs

6406531484278. >60 hrs

**Question Number : 4 Question Id : 640653445432 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

How many courses have you registered to in this term?

**Options :**

6406531484279. 1

6406531484280. 2

6406531484281. 3

6406531484282. 4

**Question Number : 5 Question Id : 640653445433 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you interested in interacting with your peers (other students) in this programme? **Options :**

6406531484283. YES

6406531484284. NO

**Question Number : 6 Question Id : 640653445434 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

How much time will you be able to allocate in a week to interact with other students? **Options :**

6406531484285. < 5 hours

6406531484286. 5 - 10 hrs

6406531484287. 10 - 15 hrs

6406531484288. >15 hrs

**Question Number : 7 Question Id : 640653445435 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you do the practice assignments?

**Options :**

6406531484289. Yes

6406531484290. No

**Question Number : 8 Question Id : 640653445436 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you do the activity questions?

**Options :**

6406531484291. Yes

6406531484292. No

**Question Number : 9 Question Id : 640653445437 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you part of a study group during the term (either student created or the mentorship pool)? **Options :**

6406531484293. I study on my own

6406531484294. I have a group with who I study

**Question Number : 10 Question Id : 640653445438 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you aware of the gmeet for every course in the evening with a mentor available who you can ask questions?

**Options :**

6406531484295. YES

6406531484296. NO

**Question Number : 11 Question Id : 640653445439 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you try and solve the graded assignment on your own?

**Options :**

6406531484297. I solve it on my own.

6406531484298. We have a group and compare answers on it while submitting.

**Question Number : 12 Question Id : 640653445440 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

When do you attempt the graded assignment?

**Options :**

6406531484299. After watching the videos

6406531484300. After doing the practice assignment

6406531484301. Check the GA first, watch video, try to solve, again watch videos, etc

**Question Number : 13 Question Id : 640653445441 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you continue doing assignments till the last week?

**Options :**

6406531484302. Always

6406531484303. Sometimes

6406531484304. No, I dont.

**Question Number : 14 Question Id : 640653445442 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you have access to quiz Question papers and solutions from the previous terms? **Options :**

6406531484305. YES

6406531484306. NO

**Question Number : 15 Question Id : 640653445443 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you try to solve previous term QPs before quizzes and final exams?

**Options :**

6406531484307. I dont have access.

6406531484308. I have the QPs but dont solve them.

6406531484309. I try and solve them.

**Question Number : 16 Question Id : 640653445444 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you attend the live sessions by instructors?

**Options :**

6406531484310. Sometimes

6406531484311. Never

**Question Number : 17 Question Id : 640653445446 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you watch the recordings of the live sessions later?

**Options :**

6406531484316. Sometimes

6406531484317. Always

6406531484318. Never

**Question Number : 18 Question Id : 640653445447 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you aware that past live sessions are now tagged with questions and annotated? **Options :**

6406531484319. YES

6406531484320. NO

**Question Number : 19 Question Id : 640653445448 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you actively participate in the discussions in the forum (google group or discourse)? **Options :**

6406531484321. YES

6406531484322. NO

**Question Number : 20 Question Id : 640653445449 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you search on the forum for answers to any doubts you may have?

**Options :**

6406531484323. YES

6406531484324. NO

**Question Number : 21 Question Id : 640653445450 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you connected with other students in the programme?

**Options :**

6406531484325. YES

6406531484326. NO

**Question Number : 22 Question Id : 640653445452 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you aware that each student in the programme is part of a Group and a House? **Options :**

6406531484336. YES

6406531484337. NO

**Question Number : 23 Question Id : 640653445453 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you try to interact with your friends at the examination centre either before or after the exam?

**Options :**

6406531484338. YES

6406531484339. NO

**Question Number : 24 Question Id : 640653445454 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you aware of the various clubs and societies available within the programme? **Options :**

6406531484340. YES

6406531484341. NO

**Question Number : 25 Question Id : 640653445455 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you aware of the Socio-technical flagship event of the programme - Paradox, which happened in person at IITM in May 2022 and online in Aug 2022?

**Options :**

6406531484342. YES

6406531484343. NO

**Question Number : 26 Question Id : 640653445456 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Do you try to network with working professionals within the programme?

**Options :**

6406531484344. YES

6406531484345. NO

**Question Number : 27 Question Id : 640653445457 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Are you planning to do higher education after this or go for a job?

**Options :**

6406531484346. Pursue higher education

6406531484347. Go for a job

**Question Number : 28 Question Id : 640653445458 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Have you registered for more courses than you can handle and dropped off some courses? **Options :**

6406531484348. YES

6406531484349. NO

**Question Number : 29 Question Id : 640653445459 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5**

Question Label : Multiple Choice Question

Rate the program in terms of the difficulty level.

**Options :**

6406531484350. 1

6406531484351. 2

6406531484352. 3

6406531484353. 4

6406531484354. 5

**Sub-Section Number :** 2

**Sub-Section Id :** 64065363279

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Number : 30 Question Id : 640653445445 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5 Selectable Option : 0**

Question Label : Multiple Select Question

If you dont attend live sessions, please mention the reason for it.

**Options :**

6406531484312. Live sessions are too long.

6406531484313. Timing does not suit me.

6406531484314. I dont get to interact with the instructors.

6406531484315. I would prefer live sessions in local language.

**Question Number : 31 Question Id : 640653445451 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0.5 Selectable Option : 0**

Question Label : Multiple Select Question

Are you part of any students' whatsapp/telegram/discourse groups?

**Options :**

6406531484327. Email

6406531484328. Google Chat

6406531484329. Discourse

6406531484330. WhatsApp

6406531484331. Telegram

6406531484332. Slack

6406531484333. Discord

6406531484334. MS Teams

6406531484335. Others

**Sub-Section Number :** 3

**Sub-Section Id :** 64065363280

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Number : 32 Question Id : 640653445460 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 2.25**

Question Label : Short Answer Question

According to you, what is the biggest value addition to you from this programme?

**NOTE:** Your answer should not exceed 300 words.

**Response Type :** Alphanumeric

**Evaluation Required For SA :** No

**Max Word Count :** 300

**Show Word Count :** Yes

**Min Word Count :** 0

**Highlight min word :** Yes

**Single Line Response :** No

**Number of Rows :** 10

**Number Of Columns :** 70

**Text Areas :** PlainText

**Question Number : 33 Question Id : 640653445461 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 2.25**

Question Label : Short Answer Question

Mention some suggestions to improve the program.

**NOTE:** Your answer should not exceed 300 words.

**Response Type :** Alphanumeric

**Evaluation Required For SA :** No

**Max Word Count :** 300

**Show Word Count :** Yes

**Min Word Count :** 0

**Highlight min word :** Yes

**Single Line Response :** No

**Number of Rows :** 10

**Number Of Columns :** 70

**Text Areas :** PlainText

**Maths2**

**Section Id :** 64065328976

**Section Number :** 2

**Section type :** Online

**Mandatory or Optional :** Mandatory

**Number of Questions :** 8

**Number of Questions to be attempted :** 8

**Section Marks :** 25

**Display Number Panel :** Yes

**Group All Questions :** No

**Enable Mark as Answered Mark for Review and**

**Clear Response :**Yes

**Maximum Instruction Time :** 0

**Sub-Section Number :** 1

**Sub-Section Id :** 64065363281

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Number : 34 Question Id : 640653445462 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0**

Question Label : Multiple Choice Question

**Options :**

6406531484357. YES

6406531484358. NO

**Sub-Section Number :** 2

**Sub-Section Id :** 64065363282

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 35 Question Id : 640653445478 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2 Selectable Option : 0**

Question Label : Multiple Select Question

Which of the following options is/are true?

**Options :**

6406531484383.  

6406531484384.  

6406531484385.  

6406531484386.  

**Sub-Section Number :** 3

**Sub-Section Id :** 64065363283

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 36 Question Id : 640653445463 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3 Selectable Option : 0**

Question Label : Multiple Select Question

Which of the following options is/are true?

**Options :**

6406531484359. If *A* is a non-zero matrix of order 4×3 and rank of *A* is 3, then the rows of *A* are linearly independent.

6406531484360. If *A* is a non-zero matrix of order 4 × 3 and rank of *A* is 3, then the columns of *A* are linearly independent.

6406531484361. If *A* is a non-zero matrix of order *m* × (*m* + 1), *m* > 1, then the maximum possible nullity of *A* is *m*.

6406531484362. If *A* is a non-zero matrix of order 4 × 5 and rank of *A* is 3, then the dimension of

the solution space of the homogeneous system *Ax* = 0 is 2.

**Sub-Section Number :** 4

**Sub-Section Id :** 64065363284

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Id : 640653445467 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (37 to 38)**

Question Label : Comprehension

Let *W* be a proper subspace of an inner product space *V* , where *dim(V)* = 3 and *PW* be the projection of *V* on *W*. Answer the subquestion based on the given data.

**Sub questions**

**Question Number : 37 Question Id : 640653445468 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

5

**Question Number : 38 Question Id : 640653445469 Question Type : MSQ Is Question**

**Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1 Selectable Option : 0**

Question Label : Multiple Select Question

Which of the following option is/are true?

**Options :**

6406531484370.  

6406531484371.  

6406531484372.  

6406531484373.  

**Sub-Section Number :** 5

**Sub-Section Id :** 64065363285

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Id : 640653445464 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (39 to 40)**

Question Label : Comprehension

**Sub questions**

**Question Number : 39 Question Id : 640653445465 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

13

**Question Number : 40 Question Id : 640653445466 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2 Selectable Option : 0**

Question Label : Multiple Select Question

Which of the following is/are unit vectors in *V* ?

**Options :**

6406531484364.  

6406531484365.  

6406531484366.  

6406531484367.  

6406531484368. 

**Question Id : 640653445474 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (41 to 43)**

Question Label : Comprehension

**Sub questions**

**Question Number : 41 Question Id : 640653445475 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

6

**Question Number : 42 Question Id : 640653445476 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

-1

**Question Number : 43 Question Id : 640653445477 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

2

**Sub-Section Number :** 6

**Sub-Section Id :** 64065363286

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Id : 640653445470 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (44 to 46)**

Question Label : Comprehension

**Sub questions**

**Question Number : 44 Question Id : 640653445471 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Short Answer Question

Nullity of the matrix *A* is

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

1

**Question Number : 45 Question Id : 640653445472 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Which of the following option is true?

**Options :**

6406531484375. *T* is one-one.

6406531484376. *T* is onto.

6406531484377. *T* is an isomorphism.

6406531484378. *T* is neither one-one nor onto.

**Question Number : 46 Question Id : 640653445473 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 2**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

-6

**Question Id : 640653445479 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (47 to 49)**

Question Label : Comprehension

**Sub questions**

**Question Number : 47 Question Id : 640653445480 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Which of the following affine subspaces was considered by Soumya?

**Options :**

6406531484387.  

6406531484388.  

6406531484389.  

6406531484390.  

**Question Number : 48 Question Id : 640653445481 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Which of the following affine subspaces was considered by Sohini?

**Options :**

6406531484391.  

6406531484392.  

6406531484393.  

6406531484394.  

**Question Number : 49 Question Id : 640653445482 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

Which of the following functions represents *f* correctly?

**Options :**

6406531484395.  

6406531484396.  

6406531484397.  

6406531484398. 

**Statistics2**

**Section Id :** 64065328977

**Section Number :** 3

**Section type :** Online

**Mandatory or Optional :** Mandatory

**Number of Questions :** 12

**Number of Questions to be attempted :** 12

**Section Marks :** 40

**Display Number Panel :** Yes

**Group All Questions :** No

**Enable Mark as Answered Mark for Review and**

**Clear Response :**Yes

**Maximum Instruction Time :** 0

**Sub-Section Number :** 1

**Sub-Section Id :** 64065363287

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Number : 50 Question Id : 640653445483 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0**

Question Label : Multiple Choice Question

**Options :**

6406531484399. Yes

6406531484400. No

**Question Number : 51 Question Id : 640653445484 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0**

Question Label : Multiple Choice Question



**Options :**

6406531484401. Useful Data has been mentioned above.

6406531484402. This data attachment is just for a reference & not for an evaluation. **Sub-Section Number :** 2

**Sub-Section Id :** 64065363288

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Id : 640653445485 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (52 to 53)**

Question Label : Comprehension



Based on the above data, answer the given subquestions.

**Sub questions**

**Question Number : 52 Question Id : 640653445486 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Find the range of *Z*.

**Options :**

6406531484403.  

6406531484404. 

6406531484405.  

6406531484406.  

**Question Number : 53 Question Id : 640653445487 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Find the probability mass function (PMF) of *Z*.

**Options :**

6406531484407.  

6406531484408.  6406531484409.  6406531484410.  6406531484411.  

**Question Id : 640653445488 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (54 to 55)**

Question Label : Comprehension



Based on the above data, answer the given subquestions.

**Sub questions**

**Question Number : 54 Question Id : 640653445489 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2 Selectable Option : 0**

Question Label : Multiple Select Question

Which of the following statements are true?

**Options :**

6406531484412.  

6406531484413.  

6406531484414.  

6406531484415.  

**Question Number : 55 Question Id : 640653445490 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1**

Question Label : Multiple Choice Question

Are *X* and *Y* independent?

**Options :**

6406531484416. YES

6406531484417. NO

**Sub-Section Number :** 3

**Sub-Section Id :** 64065363289

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 56 Question Id : 640653445491 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 3**

Question Label : Short Answer Question

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

0.65 to 0.68

**Question Number : 57 Question Id : 640653445493 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 3**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

1125

**Sub-Section Number :** 4

**Sub-Section Id :** 64065363290

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 58 Question Id : 640653445492 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

Suppose iron rods are manufactured with a mean weight of 10 kg and a standard deviation of 0.4 kg. How does the variance of the sample mean change when the sample size is increased from 25 to 64?

**Options :**

6406531484419. Variance is increased from 0.00625 to 0.016.

6406531484420. Variance is increased from 0.0025 to 0.0064.

6406531484421. Variance is reduced from 0.0064 to 0.0025.

6406531484422. Variance is reduced from 0.016 to 0.00625.

**Sub-Section Number :** 5

**Sub-Section Id :** 64065363291

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Id : 640653445494 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (59 to 60)**

Question Label : Comprehension

Let X be a random variable denoting the survival time (in years) of patients after the treatment of a certain disease. It is known that X is exponentially distributed with a mean of 2 years.

Based on the above data, answer the given subquestions.

**Sub questions**

**Question Number : 59 Question Id : 640653445495 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question

What is the probability that a patient selected at random (who went through the treatment) will survive for more than 2 years?

**Options :**

6406531484424.  

6406531484425.  

6406531484426.  

6406531484427.  

**Question Number : 60 Question Id : 640653445496 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

0.35 to 0.38

**Question Id : 640653445498 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (61 to 62)**

Question Label : Comprehension

In a telecom system, each data file consists of 400 bits. Due to noise, each data bit received may have an error with probability 0.1. It is assumed that bit errors occur independently.

Based on the above data, answer the given subquestions.

**Sub questions**

**Question Number : 61 Question Id : 640653445499 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question

Suppose *Y* represents the total number of bits without an error in a certain data file. Which of the following is true?

**Options :**

6406531484430. 

6406531484431.  

6406531484432.  

6406531484433.  

**Question Number : 62 Question Id : 640653445500 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Short Answer Question

Using Central limit theorem, find the approximate probability that there are more than 45 errors in a certain data file. Enter the answer correct to two decimal places.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

0.18 to 0.22

**Question Id : 640653445501 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (63 to 64)**

Question Label : Comprehension



Based on the above data, answer the given subquestions.

**Sub questions**

**Question Number : 63 Question Id : 640653445502 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

Find the moment generating function of the random variable *Y* .

**Options :**

6406531484435.  

6406531484436.  

6406531484437.  

6406531484438.  

**Question Number : 64 Question Id : 640653445503 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Short Answer Question

Find the expected value of *Y* . Enter the answer correct to two decimal places. **Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

2.55 to 2.65

**Question Id : 640653445504 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (65 to 66)**

Question Label : Comprehension

Let *X* denote the stock price (in units of hundred rupees) of a company *A* and let *Y* denote the stock price (in units of hundred rupees) of company *B*. The joint density function of *X* and *Y* is given below:



Based on the above data, answer the given subquestions.

**Sub questions**

**Question Number : 65 Question Id : 640653445505 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Short Answer Question

Find the value of 8*c*.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

2

**Question Number : 66 Question Id : 640653445506 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Short Answer Question

Find the probability that the stock price of *A* will be higher than that of *B*. Enter the answer correct to two decimal places.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

0.31 to 0.35

**Sub-Section Number :** 6

**Sub-Section Id :** 64065363292

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 67 Question Id : 640653445497 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 5**

Question Label : Short Answer Question

A company manufactures square shaped chess boards. The length of the chess board is normally distributed with mean equal to 40 *cm* with standard deviation of 5 *cm*. Find the probability that the area of the chess board is less than 2500 *cm2*. Enter the answer correct to three decimal places.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

0.970 to 0.984

**CT**

**Section Id :** 64065328978

**Section Number :** 4

**Section type :** Online

**Mandatory or Optional :** Mandatory

**Number of Questions :** 15

**Number of Questions to be attempted :** 15

**Section Marks :** 50

**Display Number Panel :** Yes

**Group All Questions :** No

**Enable Mark as Answered Mark for Review and**

**Clear Response :**Yes

**Maximum Instruction Time :** 0

**Sub-Section Number :** 1

**Sub-Section Id :** 64065363293

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Number : 68 Question Id : 640653445507 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0**

Question Label : Multiple Choice Question

**Options :**

6406531484442. Yes

6406531484443. No

**Question Number : 69 Question Id : 640653445508 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0**

Question Label : Multiple Choice Question



**Options :**

6406531484444. Useful Data has been mentioned above.

6406531484445. This data attachment is just for a reference & not for an evaluation. **Sub-Section Number :** 2

**Sub-Section Id :** 64065363294

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 70 Question Id : 640653445509 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1**

Question Label : Multiple Choice Question

**Options :**

6406531484446.  

6406531484447.  

6406531484448.  

6406531484449.  

**Question Number : 71 Question Id : 640653445510 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1**

Question Label : Multiple Choice Question



**Options :**

6406531484450.  

6406531484451.  

6406531484452.  

6406531484453.  

**Sub-Section Number :** 3

**Sub-Section Id :** 64065363295

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 72 Question Id : 640653445511 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question

**Options :**

6406531484454.  

6406531484455.  

6406531484456.  

6406531484457.  

**Sub-Section Number :** 4

**Sub-Section Id :** 64065363296

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 73 Question Id : 640653445512 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

**Options :**

6406531484458. Number of trains for which **stn** is a starting station

6406531484459. Number of trains for which **stn** is an ending station

6406531484460. Number of trains for which **stn** is either a starting or an ending station 6406531484461. Number of trains for which **stn** is neither a starting nor an ending station

**Question Number : 74 Question Id : 640653445513 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

**Options :**

6406531484462. Each key of the dictionary **D** should be mapped to a positive integer. 6406531484463. Each key of the dictionary **D** should be mapped to a dictionary with each key mapped to a positive integer.

6406531484464. Each key of the dictionary **D** should be mapped to a non-empty list of integers. 6406531484465. Each key of the dictionary **D** should be mapped to a non-empty list of positive integers.

**Question Number : 75 Question Id : 640653445514 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

**Options :**

6406531484466.  

6406531484467.  

6406531484468.  

6406531484469.  

**Sub-Section Number :** 5

**Sub-Section Id :** 64065363297

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 76 Question Id : 640653445515 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Multiple Choice Question

**Options :**

6406531484470. 1

6406531484471. 2

6406531484472. 3

6406531484473. 4

**Question Number : 77 Question Id : 640653445516 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Multiple Choice Question

**Options :**

6406531484474.  6406531484475.  6406531484476.  6406531484477. 



**Sub-Section Number :** 6

**Sub-Section Id :** 64065363298

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 78 Question Id : 640653445517 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3 Selectable Option : 0**

Question Label : Multiple Select Question

**Options :**

6406531484478. The first element of both the lists, **cumuList** and **aList**, will be same. 6406531484479. Number of elements in **cumuList** will be one lesser than that of **aList** 6406531484480. **cumuList** is a list of numbers in increasing order.

6406531484481. Number of elements in both lists, **cumuList** and **aList**, will be same **Sub-Section Number :** 7

**Sub-Section Id :** 64065363299

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 79 Question Id : 640653445518 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Selectable Option : 0**

Question Label : Multiple Select Question

**Options :**

6406531484482. Line 2: Incorrect initialization of **repeatPlayers**

6406531484483. Line 4: Incorrect initialization of **tempDict**

6406531484484. Line 8: Incorrect conditional statement to update **repeatPlayers** 6406531484485. No mistakes

**Sub-Section Number :** 8

**Sub-Section Id :** 64065363300

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 80 Question Id : 640653445519 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 5 Selectable Option : 0**

Question Label : Multiple Select Question

**Options :**

6406531484486.  

6406531484487. 

6406531484488.  6406531484489.  6406531484490.  

**Sub-Section Number :** 9

**Sub-Section Id :** 64065363301

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Id : 640653445524 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (81 to 82)**

Question Label : Comprehension

**Sub questions**

**Question Number : 81 Question Id : 640653445525 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3 Selectable Option : 0**

Question Label : Multiple Select Question



**Options :**

6406531484494. **nSub** is a procedure which accepts the sequence number of a student and returns True if the student has scored more than 80 marks at least in two subjects otherwise returns False.

6406531484495. **nSub** is a procedure which accepts the sequence number of a student and returns the number of subjects in which the student has scored more than 80 marks. 6406531484496. **nSub** is a dictionary with sequence numbers of students mapped to the number of subjects in which the student has scored more than 80 marks.

6406531484497. **nSub** is a dictionary with sequence numbers of students mapped to True if the student has scored more than 80 marks at least in two subjects otherwise mapped to False.

**Question Number : 82 Question Id : 640653445526 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Multiple Choice Question



**Options :**

6406531484498.  

6406531484499. 

6406531484500.  6406531484501.  

**Sub-Section Number :** 10 **Sub-Section Id :** 64065363302 **Question Shuffling Allowed :** No **Is Section Default? :** null

**Question Id : 640653445520 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (83 to 85)**

Question Label : Comprehension

**Sub questions**

**Question Number : 83 Question Id : 640653445521 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 3**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

8

**Question Number : 84 Question Id : 640653445522 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 3**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

3

**Question Number : 85 Question Id : 640653445523 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

2

**DBMS**

**Section Id :** 64065328979

**Section Number :** 5

**Section type :** Online

**Mandatory or Optional :** Mandatory

**Number of Questions :** 16

**Number of Questions to be attempted :** 16

**Section Marks :** 50

**Display Number Panel :** Yes

**Group All Questions :** No

**Enable Mark as Answered Mark for Review and**

**Clear Response :**Yes

**Maximum Instruction Time :** 0

**Sub-Section Number :** 1

**Sub-Section Id :** 64065363303

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Number : 86 Question Id : 640653445527 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0**

Question Label : Multiple Choice Question

**Options :**

6406531484502. Yes

6406531484503. No

**Sub-Section Number :** 2

**Sub-Section Id :** 64065363304

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 87 Question Id : 640653445531 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question

**Options :**

6406531484513. 1 - B, 2 - A, 3 - D, 4 - C

6406531484514. 1 - C, 2 - D, 3 - A, 4 - B

6406531484515. 1 - C, 2 - A, 3 - D , 4 - B

6406531484516. 1 - B, 2 - D, 3 - A , 4 - C

**Question Number : 88 Question Id : 640653445535 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question



**Options :**

6406531484526. 1-C, 2-B, 3-A

6406531484527. 1-B, 2-C, 3-A

6406531484528. 1-C, 2-A, 3-B

6406531484529. 1-A, 2-B, 3-C

**Sub-Section Number :** 3

**Sub-Section Id :** 64065363305

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 89 Question Id : 640653445530 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

**Options :**

6406531484509. U → B

6406531484510. B → A

6406531484511. XA → U

6406531484512. R is in third normal form.

**Question Number : 90 Question Id : 640653445536 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction**

**Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

A company manufactures magnetic disks and sells them to the local markets. These magnetic disks are tested before they are sold to determine their average lifespan. While testing a set of 150 magnetic disks for 1700 hours, you observed that 35 magnetic disks lasted for 1500 hours, 70 magnetic disks lasted for 1650 hours and the remaining lasted for 1300 hours.

What will be the MTTF of 100 magnetic disks randomly selected from the set? **Options :**

6406531484530. 1.5 hours

6406531484531. 15.1 hours

6406531484532. 31 hours

6406531484533. None of these

**Question Number : 91 Question Id : 640653445537 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

**Options :**

6406531484534.  

6406531484535.  

6406531484536.  

6406531484537.  

**Sub-Section Number :** 4

**Sub-Section Id :** 64065363306

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 92 Question Id : 640653445532 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Multiple Choice Question

**Options :**

6406531484517.  6406531484518.  6406531484519. 

6406531484520.  

**Question Number : 93 Question Id : 640653445542 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Multiple Choice Question

**Options :**

6406531484545.  6406531484546.  6406531484547.  

6406531484548.  

**Sub-Section Number :** 5

**Sub-Section Id :** 64065363307

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 94 Question Id : 640653445534 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2 Selectable Option : 0**

Question Label : Multiple Select Question

**Options :**

6406531484522.  

6406531484523.  6406531484524.  

6406531484525.  

**Sub-Section Number :** 6

**Sub-Section Id :** 64065363308

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 95 Question Id : 640653445544 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3 Selectable Option : 0**

Question Label : Multiple Select Question

**Options :**

6406531484553.  

6406531484554.  

6406531484555.  

6406531484556.  

**Sub-Section Number :** 7

**Sub-Section Id :** 64065363309 **Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 96 Question Id : 640653445528 Question Type : MSQ Is Question**

**Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Selectable Option : 0**

Question Label : Multiple Select Question

**Options :**

6406531484504.  

6406531484505.  

6406531484506.  

6406531484507.  

**Question Number : 97 Question Id : 640653445538 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Selectable Option : 0**

Question Label : Multiple Select Question

**Options :**

6406531484538. Query 1 and 2 will execute more efficiently when sequential file organization scheme is used.

6406531484539. Query 1 and 3 will execute more efficiently when multitable clustering file organization scheme is used.

6406531484540. Query 2 and 3 will execute more efficiently when sequential clustering file organization scheme is used.

6406531484541. Query 2 will execute more efficiently when multitable clustering file organization scheme is used.

6406531484542. Query 2 will execute more efficiently when sequential clustering file organization scheme is used.

**Question Number : 98 Question Id : 640653445543 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Selectable Option : 0**

Question Label : Multiple Select Question

**Options :**

6406531484549.  6406531484550.  6406531484551.  6406531484552.  

**Sub-Section Number :** 8

**Sub-Section Id :** 64065363310

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 99 Question Id : 640653445529 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4**

Question Label : Short Answer Question

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

4

**Sub-Section Number :** 9

**Sub-Section Id :** 64065363311

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 100 Question Id : 640653445533 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 3**

Question Label : Short Answer Question

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

3

**Sub-Section Number :** 10

**Sub-Section Id :** 64065363312

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Id : 640653445539 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (101 to 102)**

Question Label : Comprehension



Based on the above data and answer the given subquestions.

**Sub questions**

**Question Number : 101 Question Id : 640653445540 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 2**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

9

**Question Number : 102 Question Id : 640653445541 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 3**

Question Label : Short Answer Question



**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

67

**PDSA**

**Section Id :** 64065328980

**Section Number :** 6

**Section type :** Online

**Mandatory or Optional :** Mandatory

**Number of Questions :** 16

**Number of Questions to be attempted :** 16

**Section Marks :** 50

**Display Number Panel :** Yes

**Group All Questions :** No

**Enable Mark as Answered Mark for Review and**

**Clear Response :**Yes

**Maximum Instruction Time :** 0

**Sub-Section Number :** 1

**Sub-Section Id :** 64065363313

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Number : 103 Question Id : 640653445545 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 0**

Question Label : Multiple Choice Question

**Options :**

6406531484557. Yes

6406531484558. No

**Sub-Section Number :** 2

**Sub-Section Id :** 64065363314

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 104 Question Id : 640653445546 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Short Answer Question

Consider the graph *G* given below.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

40

**Question Number : 105 Question Id : 640653445551 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4**

Question Label : Short Answer Question

Consider a binary tree *T* that has 50 leaf nodes. Then the number of nodes in *T* that has exactly two children are\_\_\_\_\_\_\_\_\_

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

49

**Question Number : 106 Question Id : 640653445557 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4**

Question Label : Short Answer Question

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

5

**Question Number : 107 Question Id : 640653445560 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Short Answer Question

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

66

**Sub-Section Number :** 3

**Sub-Section Id :** 64065363315

**Question Shuffling Allowed :** Yes

**Is Section Default? :** null

**Question Number : 108 Question Id : 640653445547 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question

Let *G* be a connected graph with at least 5 vertices and all edges in G having distinct weights. Let *T* be a minimum spanning tree of *G*. Consider the following statements:

1. If *e* is the heaviest edge in a cycle in G, then T must exclude *e*.

2. If *e* is the lightest edge in a cycle in G, then T must include *e*.

3. If *e*3 and *e*4 are the third and fourth smallest edges in G, then T must include at least one of them.

Which of the above statement(s) is/are **correct** regarding G and T?

**Options :**

6406531484560. Statement 1 only

6406531484561. Statement 3 only

6406531484562. Statements 1 and 2

6406531484563. Statements 1 and 3

**Question Number : 109 Question Id : 640653445548 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Multiple Choice Question