

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Sixth Semester B.Tech Degree (S,FE) Examination May 2022 (2015 Scheme)

**Course Code: CS364****Course Name: MOBILE COMPUTING**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer all questions, each carries 3 marks.*

Marks

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|---|---|-----|
| 1 | Explain any three characteristics of mobile computing environment. | (3) |
| 2 | List the characteristics of Ad-hoc networks. | (3) |
| 3 | Explain spread-spectrum technology and list the various spread spectrum techniques. | (3) |
| 4 | List the functions of Operation and Support Subsystem (OSS) in GSM. | (3) |

PART B*Answer any two full questions, each carries 9 marks.*

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| 5 | a) Discuss the functions of Transaction Processing (TP) middleware. | (4) |
| | b) Explain Internet Content Adaptation Protocol (ICAP) and illustrate the data flow in an ICAP environment. | (5) |
| 6 | a) Explain handover/handoff procedure in GSM networks. | (6) |
| | b) List the various categories of mobile applications based on lifestyles with examples. | (3) |
| 7 | Illustrate the working of GSM Architecture with the help of neat diagram. | (9) |

PART C*Answer all questions, each carries 3 marks.*

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| 8 | Explain Mobile ad-hoc networks (MANETs) and list out any two example scenarios where MANET can be used. | (3) |
| 9 | Define Exposed terminal problem. | (3) |
| 10 | Discuss the client initialization procedure in Dynamic Host Configuration Protocol (DHCP). | (3) |
| 11 | Explain the Slow start behaviour of TCP. | (3) |

PART D

Answer any two full questions, each carries 9 marks.

- 12 Explain the working of Indirect TCP (I-TCP) along with its merits and demerits. (9)
- 13 Explain Carrier Sense Multiple Access/Collision Avoidance (CSMA/CA) in detail. (9)
- 14 a) Discuss IEEE 802.11 protocol architecture. (6)
- b) Illustrate the steps involved in route discovery of Dynamic Source Routing (DSR). (3)

PART E

Answer any four full questions, each carries 10 marks.

- 15 a) Discuss on Snooping TCP for Mobile transport layer. (6)
- b) Explain any four features of Android operating system. (4)
- 16 a) Explain WAP Application Environment (WAE) with the help of a suitable diagram. (6)
- b) List the features of Extensible Markup Language (XML). (4)
- 17 Explain Bluetooth Protocol Stack with required diagrams. (10)
- 18 a) Discuss various attacks on dynamic assets (an information asset in transit). (5)
- b) Explain super core concept in 5G and list its features. (5)
- 19 Explain the various components of information security. (10)
- 20 a) List the features and applications of Lifi. (5)
- b) Explain Multiple Input Multiple Output (MIMO) in 5G. (5)
