**Amrutvahini College of Engineering, Sangamner**

**Department of Computer Engineering**

**Preliminary Examination (October- 2018)**

**Pervasive & Ubiquitous Computing**

**Class: B.E. (A&B) Marks: 70**

Q.1.a) What are the key characteristics of Pervasive Computing? 5 M

b) Write short note on UPnP. 5 M

**OR**

Q.2.a) Explain connecting issues of protocols used in pervasive computing. 5 M

b) Give any real time example of context aware mobile services. 5 M

Q.3.a) Give your opinion on, “How voice computing will be used in future?” 6 M

b) What do you understood by “Automated Experience Capture”? 2 M

c) Explain the term- Service Discovery 2 M

**OR**

Q.4.a) What are context aware systems? 2 M

b) Enlist features of WML. 2 M

b) How security is provided in speech applications for pervasive computing? 6 M

Q.5.a) Discuss any wearable device used for one-handed Microinstructions? 8 M

b) Explain various components used for server side programming in Java. 8 M

**OR**

Q. 6.a) Draw & explain pervasive web application architecture. 8 M

b) Comment on: Accessing web application i) Via PDA ii) Via Voice. 8 M

Q.7.a) How touch interaction can be enhanced using i) Liquids ii) Everyday Objects 8 M

b) Explain user interface issues in pervasive computing. 8 M

**OR**

Q.8.a) Draw & explain architecture of wearable computing systems . 8 M

b) Discuss smart card based authentication mechanism in detail. 8 M

Q.9.a) Explain co-ordinate model of earth in detail. 6 M

b) Write short note on different location data sources? 6 M

c) Discuss any two application of augmented reality, used in real-life. 6 M

**OR**

Q.10. a) Enlist & explain different sensors used in smart phone. 6 M

b) Explain any two applications of wearable computing in healthcare domain. 6 M

c) What is location tracking & explain different ways of location tracking. 6 M