MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION

Diploma Programme in **Computer Engineering**
I – Scheme

Programme Educational Objectives (**PEO**) *(What s/he will continue to do even after 3-5 years of working in the industry)*

PEO 1. Provide socially responsible, environment friendly solutions to Computer engineering related broad-based problems adapting professional ethics.

PEO 2. Adapt state-of-the-art Computer engineering broad-based technologies to work in multi-disciplinary work environments.

PEO 3. Solve broad-based problems individually and as a team member communicating effectively in the world of work.

Program Outcomes (**PO**) given by NBA. *(What s/he will be able to do at the entry point of industry soon after diploma programme)*

PO 1. *Basic knowledge: Apply knowledge of basic mathematics, sciences and basic engineering to solve the broad-based Computer engineering problem.*

PO 2. *Discipline knowledge: Apply Computer engineering discipline - specific knowledge to solve core computer engineering related problems.*

PO 3. *Experiments and practice: Plan to perform experiments and practices to use the results to solve broad-based Computer engineering problems.*

PO 4. *Engineering tools: Apply relevant Computer technologies and tools with an understanding of the limitations.*

PO 5. *The engineer and society: Assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to practice in field of Computer engineering.*

PO 6. *Environment and sustainability: Apply Computer engineering solutions also for sustainable development practices in societal and environmental contexts and demonstrate the knowledge and need for sustainable development.*

PO 7. *Ethics: Apply ethical principles for commitment to professional ethics, responsibilities and norms of the practice also in the field of Computer engineering.*

PO 8. *Individual and team work: Function effectively as a leader and team member in diverse/ multidisciplinary teams.*

PO 9. *Communication: Communicate effectively in oral and written form.*

PO 10. *Life-long learning: Engage in independent and life-long learning activities in the context of technological changes in the Computer engineering field and allied industry.*

Program Specific Outcomes (**PSO**) *(What s/he will be able to do in the Computer engineering specific industry soon after diploma programme)*

PSO 1. **Computer Software and Hardware Usage:** Use state-of-the-art technologies for operation and application of computer software and hardware.

PSO 2. **Computer Engineering Maintenance:** Maintain computer engineering related software and hardware systems.

Notes for All the Semesters

1. *Every student has to **separately pass** in **End-Semester-Examination (ESE)** for **both the-ory** and **practical** by securing minimum of 40% marks, (i.e. 30 out of 75, 28 out of 70, 20 out of 50, and 10 out of 25).*

2. ***Progressive Assessment (PA) for Theory** includes Written Exam/micro projects/ Assign-ment/Quiz/Presentations/attendance according to the nature of the course. The scheme and schedule for progressive assessment should be informed to the students and dis-cussed with them at the start of the term. This scheme should also be informed in writing to the principal of the institute.*

3. *Teachers need to give **marks judiciously for PA of theory and practical** so that there is always a **reasonable correlation** between the **ESE marks** obtained by the **student** and the **PA marks** given by **respective teachers for the same student**. In case the PA marks in some courses of some students seems to be relatively inflated in comparison to ESE marks, then MSBTE may review the PA records of such students.*

4. *For developing self-directed learning skills, from each course about 15-20% of the top-ics/sub-topics, which are relatively simpler or descriptive in nature are to be given to the students for self-study and proper learning of these topics should be assured through classroom presentations by students (see implementation guideline for details).*

5. Passing Criterion for Theory and Practical Courses for all Semesters

   a. ***Passing Criterion for Theory course**: - Each Theory course consists of 2 components, ESE (End Semester Examination) and PA (Progressive Assessment)*

      (i) *The passing criterion for each theory course is obtaining minimum 40% of marks allotted to ESE & PA component together. [i.e. for total marks of ESE (70 marks) + PA(30 marks) together = (Total 70+30 =100), obtaining minimum 40 marks are mandatory for passing the Theory course.]*

      (ii) *To qualify for above condition (i), obtaining minimum 40% of marks allotted to ESE component is mandatory. [i.e. for total marks of ESE = 70, obtaining minimum 28 marks are mandatory. For passing ESE component)*

   b. ***Passing Criterion for Practical course**: - Practical course consists of 2 components, ESE (End Semester Examination) and PA (Progressive Assessment)*

      (i) *ESE and PA components of Practical course are independent head of passing.*

      (ii) *The passing criterion for ESE component is obtaining minimum 40 % of marks allotted to ESE component. [i.e. for total marks of ESE= 25, obtaining minimum 10 marks are mandatory for passing in ESE component]*

      (iii) The passing criterion for PA component is obtaining minimum 40 % of marks allotted to PA component. [i.e. for total marks of PA= 25, obtaining minimum 10 marks are mandatory for passing in PA component]

      Note: - If Candidate not securing minimum marks for passing in the PA part of practical of any course of any semester then the candidate shall be declared as detained for that semester.