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PART II

Statutory Notifications (S.R.O.)

GOVERNMENT OF PAKISTAN

**SCIENTIFIC AND TECHNOLOGICAL RESEARCH DIVISION
(Ministry of Science and Technology)**

NOTIFICATION

Islamabad, the 26th December, 2008

S.R.O. 1310(I)/2008.— In exercise of powers conferred by section 25 of the Pakistan Engineering Council Act, 1975 (V of 1976), the Governing Body, with the previous sanction of the Federal Government, is pleased to make the following bye-laws, namely:—

1. **Short title and commencement.**— (1) These bye-laws may be called the Pakistan Engineering Council, Professional Development of Engineers, Bye-Laws, 2008.

(2) They shall come into force on the 10th of July, 2010 and shall apply to the registered engineers and professional engineers.

2. **Definitions.**— (1) In these bye-laws unless there is anything repugnant in the subject or context,—

- (a) “Act” means the Pakistan Engineering Council Act, 1975 (V of 1976);
- (b) “Chairperson” means the Chairperson of the Engineering Professional Development Committee;
- (c) “Committee” means the Engineering Professional Development Committee;
- (d) “CPD” means continued professional development;
- (e) “credit point” means quantification of acknowledgement of a student’s completion of a course achievements as prescribed;
- (f) “developmental activities” means attending programmes to update knowledge;
- (g) “EPE” means engineering practice examination administered under the Council based on professional knowledge of an engineering discipline;
- (h) “formal education” means higher education or qualification recognized by the Council or the Higher Education Commission, as the case may be;
- (i) “individual activities” means publications of technical articles in recognized journals, part time lecturing and other participatory activities etc;
- (j) “registered person” means an engineer registered with the Council as registered or professional engineer;
- (k) “work based learning” means engineering related work including management; and

(I) "PEB" means professional engineering body.

(2) The words and expressions used but not defined herein shall have the same meanings as are given to them under the Act.

3. Engineering Professional Development Committee.— As soon as, may be after the commencement of these bye-laws, there shall be constituted, by notification in the official Gazette, a Committee called the Engineering Professional Development Committee working under the directions of the Governing Body. The Committee shall take all measures and perform all functions which may be necessary for professional development of all engineers registered with the Council. The Committee shall administer and evaluate CPD and EPE. The headquarters of the Committee shall be located at Islamabad and may have its branch offices at other locations.

4. Composition of the Committee.— (1) The Committee shall consist of the following, namely:—

- (a) Vice-Chairman of the Council shall be the Chairperson of Committee to be nominated by the Governing Body. The Chairperson shall cause to complete formalities for nomination or election of members of the Committee within three months of his date of nomination;
- (b) Registrar;
- (c) six members nominated by the Council from within the Governing Body. One of the members may be from industry and two members nominated by the government departments;
- (d) three members with minimum twenty years' of professional standing from academia registered with the Council as PEB;
- (e) three members with minimum twenty years' of professional standing from industry/engineering organizations registered with the Council as PEB;
- (ea) three members, experts, with minimum twenty years' of professional standing, as proposed by Convener of the Engineering Professional Development Committee; and
- (f) Additional Registrar of the Committee.

(2) The Additional Registrar of the Committee shall also act as Secretary of the Committee.

5. Powers and functions of the Committee.— The following shall be the powers and functions of the Committee, namely:—

- (a) to prescribe, monitor and review standards of professional development in co-ordination with the Council such that these are in line with internationally recognized standards;
- (b) to coordinate implementation of CPD activities;
- (c) to regulate the engineering professional bodies imparting CPD;
- (d) to record and quantify the CPD for each registered person. The Committee shall issue a certificate regarding present position of CPD to a registered person on demand against a prescribed fee;
- (e) to conduct EPE and publish results of the same; and
- (f) to perform any other function related to professional development of engineers.

6. Tenure.— Members of the Committee other than the Registrar and the Additional Registrar shall hold office for a period not exceeding three years. A member may not serve for more than two consecutive terms. At least three of present members should be re-appointed to maintain continuity. A member shall immediately vacate office, if he,—

- (a) is convicted of any offence under any law; or
- (b) has been removed from an office on account of misconduct.

7. **Disclosure of interest.**— If a member has a direct or indirect interest in any matter to be dealt with at any meeting of the Committee, that member shall declare such matter to the Chairperson in writing and shall not attend the meeting on that matter and shall not influence any other member in any way related to the matter concerned.

8. **Additional Registrar.**— (1) The Council shall appoint an Additional Registrar of the Committee on such terms and conditions as determined by the Council.

(2) The Council shall create a separate Secretariat for the Committee.

9. **Meeting of the Committee.**— (1) The Committee shall meet at least three times in one calendar year.

(2) The Chairperson of the Committee or in his absence the person presiding over the meeting shall give each member fifteen days written notice of the time, date, place of the meeting along with its agenda.

(3) In the absence of the Chairperson, a member of the Committee elected by the members present, shall preside over the meeting of the Committee.

(4) The Committee shall keep a register of attendance and minutes of its meetings and shall circulate copies thereof to the members of the Committee within two weeks after the meeting to which it relates.

(5) The minutes, when confirmed at the next meeting and signed by the person who chairs that meeting, are true and correct record of the proceedings.

(6) The quorum for a meeting of the Committee is thirty *per cent* of its members.

(7) A decision of the majority of the members of the Committee present, at any meeting, constitutes the decision of the Committee.

(8) In the event of an equal number of votes, the person presiding over the meeting shall have a casting vote.

10. **Evaluation and review.**— (1) The committee may review its activities in relation to its goals, objectives and achievements, at least once every three years.

(2) A panel drawn from the public and private sectors and appointed by the Council on the basis of expertise in relation to the functions of the Committee shall undertake the evaluation.

(3) The panel shall submit its report and recommendations to the Governing Body.

11. **Keeping of records and register.**— (1) The Committee shall maintain record of quantification of CPD and results of EPE in respect of all registered persons. For this purpose, the Committee shall keep and maintain a register of prescribed particulars of registered persons.

(2) The Committee shall provide to every applicant verified and certified record of CPD and EPE against a prescribed fee.

12. **Objectives of CPD and EPE.**— The objectives of CPD and EPE shall include,—

- (a) application of theoretical knowledge to practical situations and to evolve innovative solutions to real life problems;
- (b) application of concepts and ingredients of management to professional works including relevant legal and financial aspects;
- (c) acquisition and application of necessary communication skills;
- (d) knowledge of latest developments in various fields of engineering including information technology for specific and cross disciplinary application; and
- (e) adherence to professional ethics and acquisition of a broader understanding of obligations of engineers to society.

13. Parameters for professional development of engineers.— In order to maintain minimum standards of competence, practical knowledge and skills of registered persons, the following parameters shall be followed, namely:—

- (a) for newly registered engineer, first year after graduation shall be a grace period and CPD will be applicable from second year onwards;
- (b) a registered engineer shall have to earn nine credit points in first three years cycle, twelve credit points in next three years cycle and five credit points per year thereafter for renewal of registration under the Act;
- (c) a registered engineer is required to appear for EPE after five years of initial registration with the Council and acquire at least seventeen credit points;
- (d) a registered engineer may qualify for registration as professional engineer after qualifying in EPE;
- (e) engineers who graduated on or after January 15, 2008 and are registered with the Council as Registered Engineer are required to show five years experience from the date of registration, with requisite credit points consisting of maximum of ten credit points of practical experience and seven credit points from other categories of CPD of the years after its applicability;
- (f) professional engineers already registered with the Council are not required to appear in EPE;
- (g) existing professional engineers are required to obtain three credit points per year for renewal of registration, with effect from July 2010; and
- (h) an engineer registered as professional engineer by the International Professional Engineers Agreement (IPEA), on application, shall be recognized by the Council as professional engineer.

Explanation.— The IPEA, formerly the Engineers Mobility Forum Agreement, is a multi-national agreement between engineering organizations in the member jurisdictions which creates framework for establishment of an international standard of competence for professional engineers and then empowers each member organization to establish a section of the International Professional Engineers Register.

14. General requirement and conduct of CPD.— (1) A registered engineer shall acquire credit points as provided under clause (b) of bye-law 13.

(2) Additional credit points accumulated during any one year may be carried over to subsequent years for renewal of certificate of registration under the Act.

15. Categories of CPD and its accumulation.— (1) The CPD programmes include additional qualifications, professional skills, relevant management and communication skills acquired through additional training and experience. These aspects are grouped into the following four different categories of training, namely:—

- (a) **Formal education:** Acquiring knowledge through accredited engineering programmes and related education in management, law, finance, economics and architecture etc. Such activities includes face-to-face education, distance education and others like diploma courses of a minimum six months duration involving specialist presenters or resource persons who are external to the workplace;
- (b) **Work-based learning:** It includes on-job learning that takes place because of the workplace requirements on projects like construction, operation, supervision at site, development of computer programmes or software package, etc;
- (c) **Developmental activities:** It includes attendance of structured educational or developmental meetings over a period of time like conferences, workshops, seminars and refresher courses from Council's approved bodies; and

(d) **Individual activities:** Publications of technical articles in reputed refereed journals, part time lecturing in an approved technical institution, evaluation of dissertation at post-graduate level as external examiner and other participatory activities in the Council's recognized technical associations or institutions prescribed in bye-law 16.

(2) CPD shall be accumulated in the aforesaid four categories as set out in Annex-A.

16. **Conduct of CPD.**— The Governing Body shall ensure and manage the professional development of engineers in terms of its obligation under the Act. The Committee shall administer the professional development activities according to specified criteria and guidelines laid down by the Council. Professional institutions and associations, CPD academies, engineering universities or colleges and private institutions, registered by the Council may impart CPD in coordination with the Committee. All these institutions, associations and other bodies shall be known as professional engineering bodies in terms of clause (xxiv) of section 2 of the Act. The Council shall ensure that the responsibilities outsourced to these bodies are carried out in a fair, equitable and responsible manner without any profit motives. The Council retains the right to withdraw any outsourced responsibility from a registered professional engineering body if the circumstances so require.

17. **Recording of CPD.**— (1) Unless exempted in terms of bye-law 18, all registered engineers shall, record their CPD activities with the Committee in the following manner, namely:—

- (a) either manually by posting an authenticated copy of certificate received from a professional engineering body to the Committee or electronically in a password-protected private domain for each registered engineer, through Council's website;
- (b) registered persons may record individual CPD activities with the Committee on continuous basis as they occur, provided that all CPD activities undertaken are recorded within sixty days after completion of each activity; and
- (c) all CPD activities shall be backed by authenticated certificate or document issued by a professional engineering body and shall be produced on demand.

(2) When recording CPD activities under clause (1), any registered person who is registered in more than one professional categories shall inform the Committee regarding category of registration which is most appropriate to his area of practice, in which case the Committee evaluates the appropriateness of the CPD activities so recorded in the context of the registration category preferred by such person.

(3) CPD records will be checked and verified by the Committee against requirement of CPD policy and supporting documents provided. In case clarification is required, further information shall be provided to the Committee or an interview may be arranged at a mutually convenient time and place. The verification may take the form of a certificate or result or record of attendance with written verification from the registered CPD provider or institution of CPD activity. False claims shall be treated as serious breach of ethics and invite disciplinary actions under the Act.

18. **Possible exemptions etc., from CPD.**— (1) A registered person undergoing post-graduate studies is not exempt from CPD requirement until after award of the qualification.

(2) A registered person practicing abroad shall meet the same requirements as in Pakistan for initial or renewal of the Council's registration except those registered with 'Engineers Mobility Forum'.

(3) After attaining the age of sixty years, a registered person who continues to carry out engineering works in a consulting capacity or in a salaried position shall continue to acquire three credit points annually for renewal of registration.

(4) After attaining the age of sixty years, a registered person who does not work on a salaried position but works in an advisory role shall continue to acquire one credit point annually for renewal of registration.

(5) A registered person may apply for deferment of CPD. Such cases shall be reviewed by the Committee and decided on merit on case to case basis. Cases of physical disability, serious illness or other extenuating circumstances including non-existence of CPD facilities in very remote areas may be considered for exemption for a reasonable time.

(6) A registered engineer may appear in EPE after a minimum five years of practical experience and he (registered engineer) may be given the following credit of experience if he has obtained a recognized post-graduate engineering degree, as under:-

- (a) M.Sc twelve Months;
- (b) Ph.D thirty-six Months.

Provided that the degree is obtained under an accredited engineering programme.

19. **Audit.**— The Council will conduct random audits of up to ten *per cent* of the CPD records annually. If selected for audit, registered person shall be required to send, within eight weeks of initial notification, verification of their CPD activities in the form of a certificate or list of results or record of attendance or receipt of course payment or a written verification from the registered educational institution, which presented the developmental activity.

20. **Non-Compliance.**— In the event of a registered person not complying with the requirements of the CPD, the Council may adopt the following courses, namely:-

- (a) the concerned engineer may be required to follow an approved remedial programme of CPD within a specified period by the Council; or
- (b) refer his case to the Enrolment Committee for taking appropriate action according to the Act, Bye-laws and criteria evolved by the Governing Body.

21. **EPE.**— For assessment of engineering competence, knowledge and skills of an applicant engineer, the Committee shall hold an examination which may be arranged and conducted through local or foreign services hired or availed for the purpose. The EPE is optional for a registered engineer but is an essential part of assessment for the title of professional engineer.

22. **Eligibility.**— When a registered engineer has attained a minimum of five years of practical experience in relevant field of engineering from a recognized engineering organization or institution or service and has earned requisite credit points consisting of maximum of ten points of practical experience and seven credit points from other categories of CPD, he shall become eligible to apply for EPE in the form Annex-B.

23. **Format of the EPE.**— The format of the EPE shall be as under, namely:-

- (a) the examination shall comprise of two parts, Part-I, of two hours, shall be common to all engineering disciplines and Part-II, of three hours, shall be discipline and specialized area-based consisting of two sections breadth and depth, specialized area, examinations respectively. Part-II shall be based on open book method. Syllabus of each part of EPE, duly amended from time to time, shall be finalized by the respective Experts' Committees and approved by Engineering Professional Development Committee. Basic parameters of the syllabi of each part are as set out in Annex-C;
- (b) qualifying marks for each part shall be *sixty per cent*. The candidate shall have to pass each part independently. If any candidate does not qualify in any part, he shall be eligible to appear in the same part in the next three consecutive examinations. In case of not qualifying or not appearing in the next three consecutive examinations, the candidate shall be declared as not qualified and may appear in both parts.

- (c) the Examination shall be held twice a year and results shall be published through the Council's website; and
- (d) an application for EPE shall be supported by a professional engineers with minimum five years of professional standing or a professional engineer authorized by the Council. A professional engineer supporting a prospective candidate shall send an independent report to the Committee on Proforma attached with the application form at Annex—B.

24. **Fees.**— The Council shall charge such fees as may be specified by it from time to time for CPD and EPE.

25. **Reference to Council.**— Any person aggrieved by any order of the Committee may challenge such order before the Council within thirty days whose decisions shall be final.

Annexure-A
[see bye-law 15]

CATEGORIES OF CPD

Category (1)	Applicable CPD program (2)	Duration Credit Hrs (3)	Credit Points (4)	Remarks (5)
<u>Category-a</u> Formal Education (Higher Education duly recognized by PEC/HEC) Limit of category-a = 4 credit points/year	1. Post-graduate Diploma (PGD) 2. Award of Post-graduate Degree in Engineering and related subjects like IT, Finance, Management, Law, Economics etc. 3. Award of Doctorate (Ph.D) in Engineering		2 4 4 6 12	(Above 6 and below 9 months duration) (9 to 12 months duration) (Course work only) (Course work plus research work) All achievements must be supported with records and certificates.
<u>Category-b</u> Work-based Activities Limit of category-b = 2 credit points/year	Work Experience (Engineering related work including relevant aspects of Management)	400	1	
<u>Category-c</u> Developmental Activities Limit of category-c = 3 credit points/year	1. Participation in Training & Development Programmes 2. Participation in Conference 3. Participation in Seminar 4. Participation in Lectures 5. Participation in Workshop 6. Refresher Course/Short Course	02 02 02 One day One day	1 0.5 0.5 0.5 1 1	
<u>Category-d</u> Individual Activities Limit of category-d = 3 credit points/year	1. Membership of a recognized professional Association/body 2. Invited Lecturer 3. Symposium panelist 4. Writing and publishing a		1 2 1.5 0.5 1.5	National bodies International bodies (Limit of memberships = 2 to be accounted for valid members annually) Lectures excluding routine teaching at institutions and university. National

	Research Article in Journals/ Technical Report		3	(HEC/PEC approved). International (Publication after a peer review).
	5. Writing Conference Paper	0.5 1.5	National International	
	6. Authoring a Book	5	Approved by a professional body.	
	7. Part of activities such as emergency/recognized social work	1	Professional contribution in such activities.	
	8. Participation in statutory, technical or non-technical committees	1	Active participation	
	9. Managing technical event	1 2	National International	



PAKISTAN ENGINEERING COUNCIL

**APPLICATION FORM FOR
ENGINEERING PRACTICE EXAMINATION (EPE)**

1. PERSONAL INFORMATION

Name: _____

Photo

Father's Name: _____

PEC Registration No: _____ Discipline: _____

Gender: _____ Domicile : _____ Nationality: _____

Date of Birth: _____ / _____ / _____
(Day) (Month) (Year)

Present Address:

Permanent Address: _____

Phone Number (Line No): _____ Mobile No: _____ E-mail: _____

2. QUALIFICATION

2.	Qualifications	Name of University/ College/Institute/ Board	Year of Passing	Obtained Marks/ Total Marks	%age	Certificate/ Degree with discipline
2.1	F.Sc or Equivalent					
2.2	B.E. /B.Sc. Engg. Degree or Equivalent					
2.3	Post-graduate Diploma/Degree or Equivalent					
2.4	Doctorate (Ph. D) or Equivalent					

2.5 Any other non-engineering qualification (Post-graduation) obtained:

Note: In case of qualification in more than one engineering discipline, indicate field of specialization.

3. EMPLOYMENT STATUS

Sr. No.	Name of Company/ Organization	Status (Govt./Semi-Govt/ Autonomous/Private)	Designation	Experience From–To	Experience Years/Months
3.1					
3.2					
3.3					
3.4					
3.5					
3.6					
3.7					
3.8					

4. CPD SCORE ACCUMULATED IN LAST FIVE YEARS (20..... to 20.....)

u	Category	Sub-Category (As per Annex-A)	Professional Engineering Body	Credit Hours Claimed	Credit Points Claimed	Remarks
4.1	Formal Education (Higher Education duly recognized by PEC/HEC)					
4.2	Work Based Learning (Work Experience, Engineering related work including Management)					
4.3	Developmental Activities (Conferences, Seminars, Workshops, Lectures, memberships etc.)					
4.4	Individual Activities (Symposium Panelist, Authoring of Book, recognized social work etc.)					

5. ANY OTHER ACHIEVEMENT

Note: Attach additional sheets if required.

6. DISCIPLINE OF PROFESSIONAL ENGINEER APPLIED FOR

7. EXAMINATION CENTRES (For detail visit PEC website)

Sr. No.	Preferred locations in order of priority
7.1	
7.2	
7.3	

8. FEE

Prescribed Fee of Rs. for EPE has been paid in Bank
Branch.....Vide Challan No./Draft No.....
Dated.....

9. DECLARATION

- I wish to take the EPE for (spring/fall) year 20..... as prescribed by PEC in discipline as mentioned in the application form.
- I undertake to inform the EPDC/PEC of any change in my postal address and profession.
- I have no objection against my EPE process being stopped, should there be inaccuracy in the submitted information.
- I also undertake to abide by the PEC Act, Bye-Laws, relevant rules and Codes of Ethics and Conduct, prescribed for the members of the Council.
- I certify that the above particulars mentioned by me are true and correct.

Date: _____

Signature of the Engineer:_____

10. SPONSOR

From Personal knowledge of the applicant and in consideration of his/her qualifications as stated in the form, I recommend him/her as being in every way a fit and proper person to be certified as Professional Engineer.

10.1 Sponsor

Name: _____ PEC Registration Number: _____

Discipline: _____ Experience: _____

Designation: _____ Status: _____

Signature: _____

Date: _____ Official Stamp: _____

Note.— An application shall be supported or sponsored by a professional engineer registered as such by the Council.

Instructions:

Please ensure provision of following documents with the application form:

1. Attested copy of valid PEC registration certificate
2. Attested copies of experience certificates
3. Supporting documents of CPD activities
4. Attested copy of CNIC and Domicile
5. Two passport size photographs (duly attested on the back side)
6. EPE fee paid receipt.

Applications must be sent to:

EPE Directorate, EPDC,
Pakistan Engineering Council,
Ataturk Avenue (East),
Sector G-5/2, P.O. Box No. 1296,
Islamabad.

To be filled by Sponsor

(Confidential when completed)

To be filled by each sponsor and sent separately to EPDC/PEC in a sealed envelope;

Report on

Mr/Miss _____ S/O, D/O _____
Discipline: _____ PEC Registration No: _____

1. How long have you known the applicant Years
2. In what capacity. Employer Advisor Sr. Colleague

 Colleague Friend Client
3. Do you recommend the applicant for certification as Professional Engineer.

 Yes No
4. If yes please give your own impression of the candidate and why you consider him or her a fit person to be certified as Professional Engineer (PE) in around 50 words.

Signature: _____ Name of Sponsor: _____

Discipline: _____ Experience: _____

PEC Registration No: _____

Correspondence Address: _____

Contact No: _____ Email id: _____

Send to:-

EPE Directorate EPDC, Pakistan Engineering Council,
Ataturk Avenue (East), G-5/2, P.O. Box No. 1296, Islamabad

(FOR OFFICE USE ONLY)

A. Accounts Section

Mode:	Cash	Cheque	DD
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Received Rs. _____ Receipt No. _____

Chq/DD No. _____

(Signature of Accounts Clerk)

(Accounts Executive)

B. CPD Directorate

1. Discipline: _____ 2. PEC Reg No: _____
3. Renewal Upto: _____ 4. Registration Year: _____
5. Experience: _____ 6. CPD Credit Points: _____
7. Recommendations of CPD Directorate:

(Eligible / Not Eligible)

C. EPE Directorate

10. EPE Roll No: _____ 11. EPE Centre: _____

12. EPE Grading:

Sections	Marks Obtained	Total Marks	Percentage	Remarks
Part-I				
Part-II				
Part-III				
Total				

13. For PE Title

(Selected / Not Selected)

Discipline: _____

Registration Number: _____

(EPE Directorate)

SYLLABUS FOR EPE

There shall be two-tier examination for enhancement of title from registered engineer to professional engineer — Part – I common to all engineering disciplines and Part – II discipline, specialized area based.

PART – I

This is common to all disciplines comprising forty multiple-choice questions of one mark each, total marks forty, with the duration of two hours.

Syllabus components:

- (i) MANAGEMENT (ENGINEERING RELATED)
 - (a) quality issues;
 - (b) finance;
 - (c) procurement/legal; and
 - (d) latest trends;
- (ii) COMMUNICATION SKILLS
 - (a) understanding the basic English;
 - (b) principles of effective communication;
 - (c) communication methods and skills; and
 - (d) business messages;
- (iii) ETHICAL AND SOCIAL ISSUES
 - (a) code of ethics;
 - (b) professional obligation of engineers;
 - (c) role of opportunity and conflicts; and
 - (d) interpersonal relations;
- (iv) ENVIRONMENTAL ISSUES AND POLICIES
 - (a) basic concept of environment;
 - (b) environment and safety;
 - (c) environmental impact assessment (EIA); and
 - (d) environmental organizations and legal framework;
- (v) HAZARDS AND RISK MANAGEMENT
 - (a) occupational health hazard and risk;
 - (b) principles and methods of hazard identification;
 - (c) evaluation, risk assessment and its human behavioral aspects of risk management fire safety; and
 - (d) mitigation measures.

PART – II

This is open book breadth and depth examination comprising sixty multiple-choice questions of one mark each, total marks sixty, with the duration of three hours. There shall be the following two sections of Part-II for each major discipline of EPE:—

- (i) Section — A Breadth (discipline wise) 25 MCQs; and
- (ii) Section — B Depth (specialized areas) 35 MCQs.

The syllabus for Section — A (breadth) shall generally conform to latest undergraduate syllabus of Bachelor of Engineering or equivalent. Syllabus for Section — B (depth) shall be based on practical concepts framed to judge the practical experience and field based knowledge of registered engineers.
