

Name: ----- Entry No. -----

B

AML 851 FRACTURE MECHANICS (2008-2009)
Major Test

1. Fill up the blanks with appropriate words/sentences

(30)

- (i) On application of a tensile overloading fatigue cycle over a constant amplitude loading, following immediate changes in crack growth kinetics takes place (a) - ----- (b) ----- (c) -----.
- (ii) As parameter Q becomes more negative, the J_C fracture toughness has a tendency to ----- because-----.
- (iii) An increasing n value (in Ramberg-Osgood relation) tends to ----- Q parameter which has a -----contribution on J -toughness.
- (iv) The condition/s for slow stable cracking in a structure in terms of J -parameter is/are given as follows-----.
- (v) The J parameter can characterize crack growth in a test specimen if these conditions are met-----.
- (vi) The stretch zone formation occurs at the crack tip because of-----.
- (vii) The CTOD design curve is applicable for------(crack geometry) and uses a S.F. of ----- on crack size.
- (viii) δ_u toughness differs from δ_m in the sense that-----.
- (ix) A dimensionless calibration curve is obtained by plotting -----Vs-----to determine crack growth using compliance technique.
- (x) The requirements of a good fatigue crack in a FT test specimen are -----.